C6

SOUTHWESTERN JOURNAL OF ANTHROPOLOGY

Published by the University of New Mexico and the Laboratory of Anthropology, Santa Fé, in the interest of general anthropology

VOLUME 6 • NUMBER 1 • SPRING • 1950

PROPERTY OF PRINCETON UNIVERSITY LIBRARY
MAY 26 1950
RECEIVED

The Complexity of Social Organization in Arnhem Land — A. P. Elkin 1

Early History of Agriculture in Middle Asia — Henry Field and Kathleen Price 21

The Hypothetical Situation: a Technique of Field Research — Melville J. Herskovits 32

Culture, Society, and the Individual — Wilson D. Wallis 41

Studies in African Linguistic Classification: IV. Hamito-Semitic — Joseph H. Greenberg 47

The Focus of Cuban Santeria — William R. Bascom 64

Two Japanese Religious Sects — Marvin K. Opler 69

Calendric Terms of the Southern Puget Sound Salish — Arthur C. Ballard 79

UNIVERSITY OF NEW MEXICO PRESS
ALBUQUERQUE

THE SOUTHWESTERN JOURNAL OF ANTHROPOLOGY is designed to include articles in all branches of anthropology—ethnology, archaeology, folklore, linguistics, physical anthropology, and anthropogeography—relating to peoples and cultures, past and present, in any region. It is offered as a vehicle of expression for anthropologists in all parts of the world.

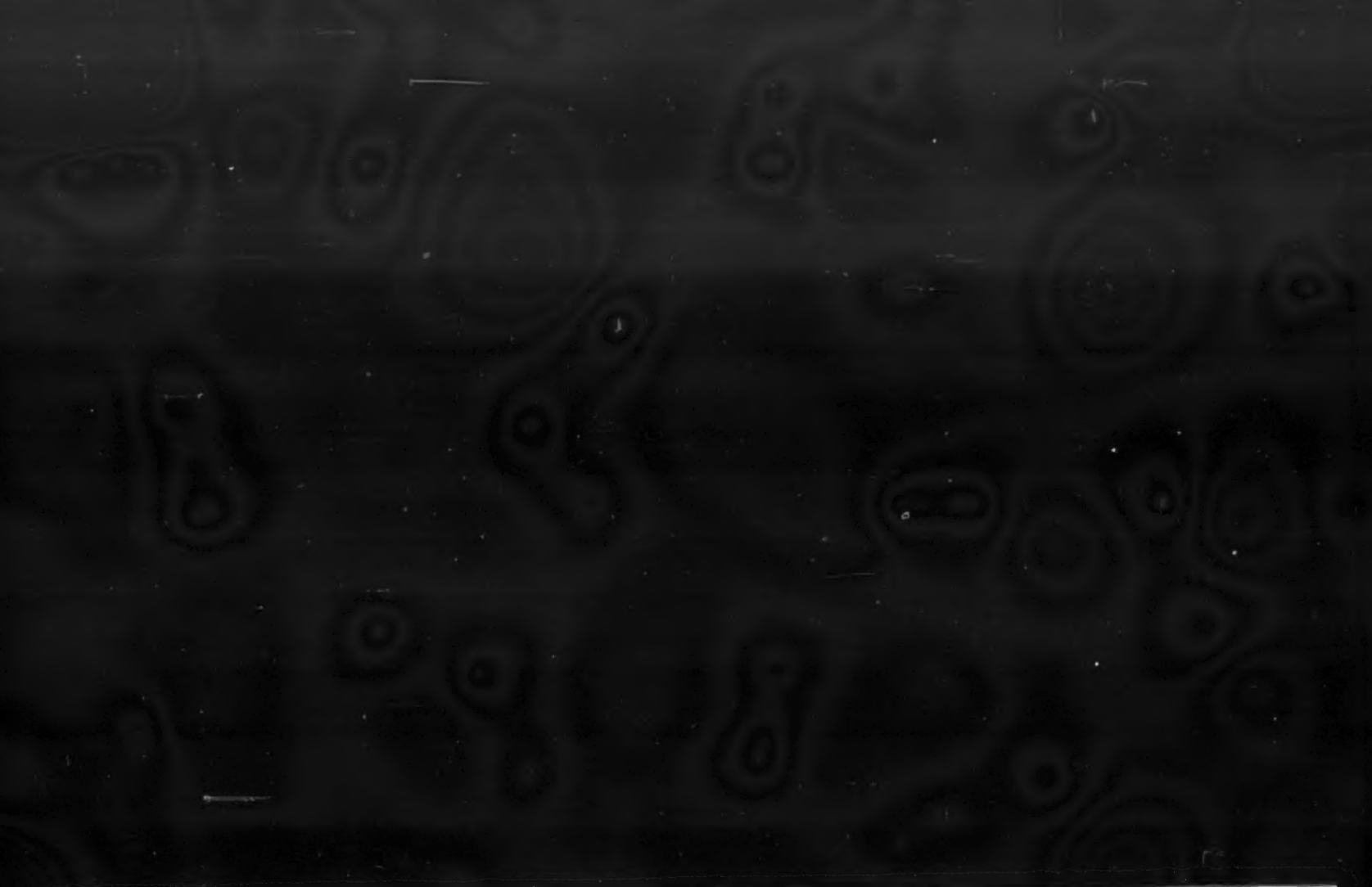
Manuscripts and other editorial materials should be addressed to the Editor, LESLIE SPIER, University of New Mexico, Albuquerque, New Mexico.

Subscription: $4.00 a calendar year (single number, $1.00). Foreign subscription, 1 £ sterling or its equivalent in local currency. Subscriptions should be sent to W. W. HILL, University of New Mexico, Albuquerque, New Mexico. (Remittance should be made payable to the *Southwestern Journal of Anthropology*.)

Issued in quarterly numbers: Spring, Summer, Autumn, Winter of each year.

Microfilm copies of whole volumes of the SOUTHWESTERN JOURNAL OF ANTHROPOLOGY may be purchased for permanent files by libraries and other subscribers from UNIVERSITY MICROFILMS, 313 N. First Street, Ann Arbor, Michigan, to whom inquiries should be addressed.

Entered as second-class matter June 17, 1947, at Albuquerque, New Mexico, under Act of Congress of July 16, 1894.



SOUTHWESTERN JOURNAL OF ANTHROPOLOGY

Published by the University of New Mexico
and the Laboratory of Anthropology, Santa Fe
in the interest of general anthropology

VOLUME 6
1950

UNIVERSITY OF NEW MEXICO PRESS
ALBUQUERQUE

Leslie Spier, *Editor*
W. W. Hill, *Associate Editor*
University of New Mexico

CONTENTS

The Complexity of Social Organization in Arnhem Land
A. P. Elkin 1

Early History of Agriculture in Middle Asia
Henry Field and Kathleen Price 21

The Hypothetical Situation: a Technique of Field Research
Melville J. Herskovits 32

Culture, Society, and the Individual
Wilson D. Wallis 41

Studies in African Linguistic Classification:
IV. Hamito-Semitic Joseph H. Greenberg 47

The Focus of Cuban Santeria
William R. Bascom 64

Two Japanese Religious Sects
Marvin K. Opler 69

Calendric Terms of the Southern Puget Sound Salish
Arthur C. Ballard 79

Some Notes on Early Migrations in the Southwest Pacific Area
Felix M. Keesing 101

Eastern-Central Arizona Archaeology
in Relation to the Western Pueblos Erik K. Reed 120

A Wooden Spear of Third Interglacial Age from Lower Saxony
Hallam M. Movius, Jr. 139

Studies in African Linguistic Classification:
V. The Eastern Sudanic Family Joseph H. Greenberg 143

Plant Evidence for Early Contacts with America
George F. Carter 161

A Draft Map of the Culture Areas of Asia
Raoul S. Naroll 183

Hupa Sorcery
William J. Wallace and Edith S. Taylor 188

Genetics vs. Physical Anthropology in Determining Racial Types
CHANDLER W. ROWE 197

Peyotism Among the Kiowa-Apache and Neighboring Tribes
CHARLES S. BRANT 212

Studies in African Linguistic Classification:
VI. The Click Languages JOSEPH H. GREENBERG 223

Social Life and Authority in the East European
Jewish Shtetel Community THEODORE BIENENSTOK 238

The Blond Mandan: a Critical Review of an Old Problem
MARSHALL T. NEWMAN 255

Cheremis Dream Portents
THOMAS A. SEBEOK 273

Big Kivas, Little Kivas, and Moiety Houses
in Historical Reconstruction FLORENCE HAWLEY 286

Methods of Popping Corn and their Historical Significance
EDGAR ANDERSON AND HUGH C. CUTLER 303

In Defense of Morgan's "Grecian Gens":
Ancient Kinship and Stratification HOWARD BECKER 309

An Analysis of Ritual Co-Parenthood (Compadrazgo)
SIDNEY W. MINTZ AND ERIC R. WOLF 341

Patolli, Pachisi, and the Limitation
of Possibilities CHARLES JOHN ERASMUS 369

Studies in African Linguistic Classification:
VII. Smaller Families; Index of Languages JOSEPH H. GREENBERG 388

The Indian Shaker Church: a Study of
Continuity and Change in Religion JUNE MCCORMICK COLLINS 399

Amaranths as Dye Plants among the Pueblo Peoples
JONATHAN D. SAUER 412

Fossil Evidence of Austromelanesian Migrations
in Malaysia? DIRK ALBERT HOOIJER 416

Two Newly-Recorded Dakota House Types
WESLEY R. HURT AND JAMES L. HOWARD 423

Index 427

SOUTHWESTERN JOURNAL
OF ANTHROPOLOGY

VOLUME 6 • NUMBER 1 • SPRING • 1950

THE COMPLEXITY OF SOCIAL ORGANIZATION IN ARNHEM LAND

A. P. ELKIN

ABORIGINAL AUSTRALIA may be divided into several cultural areas, and these for certain purposes may be grouped into larger regions. Almost all have been influenced by their neighbors, and ultimately some of the traits have started from a north-coastal point, and possibly from beyond it.

The most complex region is Arnhem Land, using that term in its earlier sense to cover the roughly rhomboidal area north of the Fitzmaurice and Roper Rivers and washed by the Timor and Arafura Seas on the west and north respectively and by the Gulf of Carpentaria on the east.[1] This region consists of three culture sub-regions: I. the northwestern, II. the western (or Goulburn Island-Alligator-Liverpool Rivers) and III. the eastern (often referred to as Northeast Arnhem Land). Two border subregions could be added: IV. the southeastern (along the Roper River), and V. the southwestern (Fitzmaurice River-Port Keats). The inadequate information about the social organization of the Pine Creek natives suggests it was an intrusion of the main southern type like the Wadaman—VI on the map.

THE NORTHWESTERN SUB-REGION

The social organization of the northwestern corner of the region, from just north of the Daly River to Melville Island and the Coburg Peninsula, is marked by an absence of moieties and sections (or subsections), and by a use of terms

1 In recent years, the term Arnhem Land has gradually been limited to the area north of the Roper and east of a line some sixty miles east of the Darwin-Katherine road, and consisting for the most part of an Aboriginal Reserve.

GN1
.S72
v.6

and a practice of marriage which would be highly irregular if these social divisions were functioning. In the Wagaitj, for example, a coastal tribe from the Daly River to Delissaville west of Darwin, only one term is applied to all males of the grandparents' generation and only one term to all the females of the same generation. Further, in addition to the normal marriages, a man may marry the

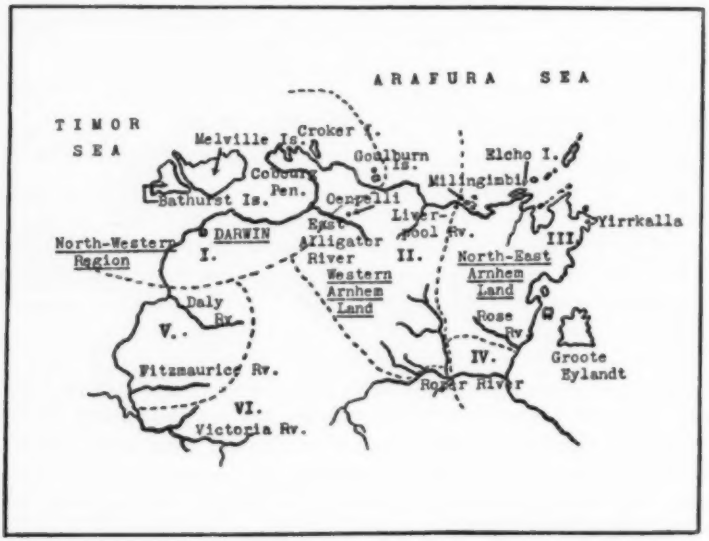


FIG. 1 Cultural sub-regions of Arnhem Land and vicinity, northern Australia.

Selected tribes in the several sub-regions:

I. *The Northwestern:* Wagaitj, Tiwi (Melville and Bathurst Islands), Larakia, Iwaidja, Kakadu.
II. *The Western:* Maung and Gunwinggu, overlapping with I; Nakara, Djauan.
III. *The Northeastern:* Wulamba (Murngin-Balamumu). Rembaranga on the west and the Nungubuyu on the south are buffers and culture-transmitters to this sub-region.
IV. *The Southeastern:* Wandaran, Ngalakan, and Mara. This sub-region extends to the Anyula along the Gulf coast.
V. *The Southwestern:* Muluk-muluk, Murinbata, Nangiomeri.
VI. *The Southern Intrusion:* Warrai, Djamindjung, Togoman, Wadaman.

daughter of his parallel-cousin's daughter or son; or he may marry the daughter of his mother's father's brother's son or daughter. That is, he may marry the daughter of a man or of the latter's sister. The kinship system and marriage

rules of other Daly River tribes are similar to the Wagaitj.[2] If, however, moieties or subsections were present and functioning, he could marry one of these, the other being in his own moiety or section. In Bathurst Island, too, a common marriage is with a sister's daughter's daughter (the sister not being "own" sister), who would be in a man's own moiety or section if there were such a division. The absence of sections (or subsections) also allows structurally what would be distortions if they were present. Thus, Bathurst Island genealogies record marriages between persons of succeeding generations, such as between a man and his "mother," that is, his father's wife or widow, not being his own mother, and between a man and his mother's brother's wife. These two marriages were also recorded for the Kakadu of the lower East Alligator River by Baldwin Spencer in 1912, amongst whom he failed to find moieties or subsections.[3]

This area was formerly larger than at present. The subsection system had only reached the Murinbata tribe (of the coastal region between the Fitzmaurice and Port Keats) a few years before 1934 when a cross-cousin type of kinship system was becoming adjusted to it.[4] The same appears to be the case also with the Maung of Croker Island and the Gunwinggu of the Alligator River district, for, in spite of the patent subsection marriage arrangement, a man may marry a "father's sister" who is or may be a mother's brother's wife (widow) or a wife's mother, but is not usually own father's sister; and genealogies show marriages with father's sister's daughter's daughter, and with mother's father's sister's daughter.[5]

---

2 W. E. H. Stanner, *The Daly River Tribes* (Oceania, vol. 3, no. 4, pp. 389-391). The Wagaitj material is based on my own fieldwork.

3 *Native Tribes of the Northern Territory*, pp. 47-52. W. L. Warner (*Kinship Morphology of Forty-One Australian Tribes*, American Anthropologist, vol. 35, no. 1, 1933, pp. 64-65) suggests that Spencer's cases were aberrant and make-shift arrangements, "probably due to the lack of a near younger brother of the husband of the woman." Recent fieldwork in the area by Mr and Mrs R. M. Berndt, however, shows that mother's brother's widow (father's sister) is definitely regarded as a possible wife. This is reflected in genealogies, the use of kinship terms between subsections, and in some subsection marriages, and will be discussed under the heading "Subsections and Kinship." If the Kakadu did not possess matrilineal phratries in 1912, marriage with father's widow would not have broken phratry exogamy; some cases of such infraction do occur, but they are irregular. If, however, this tribe did have phratries, as is most likely, the phratry of the father's widow whom the son married, need not have been the phratry of the son's mother, for usually a person could marry into either or both of two phratries. As will be seen, in eastern Arnhem Land, with patrilineal moieties, marriage with father's widow (not own mother) does occur.

4 W. E. H. Stanner, *Murinbata Kinship and Totemism* (Oceania, vol. 7, no. 2), pp. 197 ff.

5 I am indebted to Mr and Mrs Berndt for particulars of the social organization of these two tribes, amongst whom they worked in 1947 under the auspices of the Australian National Research Council.

Most of this area, however, presents another form of grouping which is rare elsewhere. This is the phratry. From Melville and Bathurst Islands to Oenpelli, where it has been well studied, it is an exogamous matrilineal social group with its own totem or totems. The number of phratries in a tribe is not immutable. Three were reported for the Melville and Bathurst Islands in 1929,[6] but today there are five, one being admittedly of recent origin, while in the Alligator River district, there are four with a fifth in process of development. In each case, the phratries function as two pairs of "mates" with a third member being recognized by one of the pairs. The "mate" phratries do not intermarry but marry into the other set of mates. Thus, a man of one phratry may have wives of two phratries, and because of the direct matrilineal descent rule, his children may belong to these two phratries. In Melville and Bathurst Islands there is a locality and mythological basis behind the phratries, but this has not yet been proved for the Maung. Spencer, however, suggested that it might be so for the Iwaidja of Port Essington, who had three exogamous totemic phratraic groupings, two of which intermarried with the third, but not with each other.[7]

The Wagaitj tribe was divided into three named geographical groups, but there is no evidence yet to show that these were exogamous, or were phratries.

This area or sub-region has one other noteworthy feature: bilateral cross-cousin marriage was or is allowed, or, indeed, was the norm. The exceptions are the Murinbata, where, although the kinship system is of the bilateral cross-cousin marriage type, actual cross-cousin marriage was prohibited at the time of observation; and the overlapping Goulburn Island kinship system as recorded in 1947 by Mr and Mrs Berndt was of the Nyul-Nyul or Aranda type in which marriage is prohibited with cross-cousins, but is typical between their children. This is a curious kinship outlier in an area of cross-cousin marriage. It is a terminological adjustment to the subsection system, but alternative marriages with the cross-cousin subsection are recognized, and a smooth means of adjustment to the Gunwinggu cross-cousin system on the mainland opposite is in operation. Moreover, Dr W. L. Warner reported about 1927-29 that the kinship system and marriage of the Maung was of the bilateral cross-cousin type.[8]

To sum up, the northwestern sub-region, a coastal strip, is characterized by an absence of moieties and sub-sections; by a use of kinship terms and by marriages which would be a distortion of the social structure if such divisions

6 C. W. Hart, *The Tiwi of Melville and Bathurst Islands* (Oceania, vol. 1, no. 2, pp. 167-180).

7 Spencer, *op. cit.*, p. 46.

8 Warner, *Kinship Morphology of Forty-One North Australian Tribes*, p. 66, table of terms.

were functioning; by a basic norm of bilateral cross-cousin marriage, and in the northern part of the sub-region by exogamous matrilineal phratries of totemic significance, the number of which is not fixed, and which function in marriage in a kind of moiety order. Finally, the former northeastern part of this *sub-region* has been subjected to the diffusion of moieties and of subsections, which are features of the other two sub-regions. To these we now turn. The first is the Goulburn Island-Alligator and Liverpool Rivers districts, stretching south to the Djauan tribe of the upper Katherine River area.[9] The second is far-eastern Arnhem Land.

The moiety system which prevails throughout these two sub-regions is primarily of ceremonial significance, the great ceremonies with their song cycles belonging to one or other of the two moieties. There are also, especially in the far-eastern sub-region, separate moiety homes of the dead. The clans, too, each with its own totems, are divided amongst the moieties.

PHRATRIES AND MOIETIES IN WESTERN ARNHEM LAND

Two complications are present. In the Goulburn Island-Alligator and Liverpool Rivers district, this ritual dual organization seems to have been imposed on a phratry system similar, as has been stated, to that of the Coburg Peninsula and the rest of the northwest corner. Spencer (1911) was aware of the absence of the moiety organization, but did not notice any phratry system at Oenpelli, although it may have been there. Indeed, a new phratry is reported as of Kakadu tribal origin.[10] At present there are four phratries with a fifth one recently introduced. Natural objects as well as human beings are divided amongst the phratries, each of which has also a principal totem, but it is of the social rather than the cult variety.

On top of this phratry organization has come the moiety system. In all eastern Arnhem Land this is patrilineal, reflecting the patrilineal and male emphasis of the cult-life. In the west, however, faced with the strong matrilineal nature of the phratries, it became matrilineal to prevent confusion. If the descent of the phratries had been indirect matrilineal, as with the four-section or with the subsection system, patrilineal moieties could have combined with them.

9 My own genealogical work amongst the Djauan shows that the kinship system is now mainly of the Aranda type, but the use of only two terms for males in the grand-parents' generation, and marriage between subsections related as cross-cousins, suggest that cross-cousin marriage may have once been the norm. Warner says that according to his informants, 1926-28, this was so, at least for the northern part of the tribe (*Kinship Morphology of Forty-One North Australian Tribes*, p. 45).

10 Report by Mrs Catherine Berndt.

Thus in the system

where the letters denote sections (not phratries), and where the mother-child relationship is indicated by the arrows, and marriage by =, it is clear that M-P and O-N are patrilineal father-child couples and could be patrilineal ceremonial moieties, especially as marriage between M and P or between O and N is highly irregular. In the Alligator-Liverpool district, however, where the letters indicate *phratries,* not sections, *each phratry is the mother-child cycle*; therefore, patrilineal descent grouping, moieties or other, would mean a division of each phratry, so that there would be two M's, two O's, and so on. Thus, a man of Mx (being the part of phratry M in moiety x) would marry a woman of Oy (the part of phratry O in moiety y), and their children would belong to Ox, being the other part of phratry O which is in moiety x, along with their father, Mx. Again a man of My (the part of phratry M in moiety y) marrying a woman of Ox (the part of phratry O in moiety x) would have children Mx, that is, in the part of phratry M which is in moiety x. So too with phratries N and P. Moreover, this is doubled because each phratry intermarries with two others. The following table shows the result (the sign = denotes intermarrying groups; the capital letters denote phratries; x and y the moieties):

Patrilineal Moieties

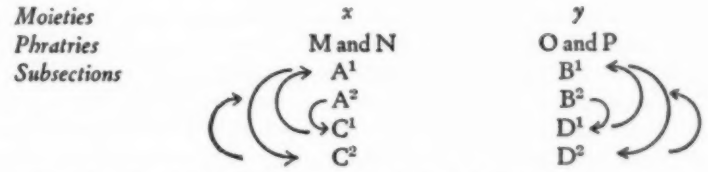
x		y	x		y
Mx	=	Oy	Nx	=	Oy
Ox	=	My	Ox	=	Ny
Mx	=	Py	Nx	=	Py
Px	=	My	Px	=	Ny

But as the phratry is the primary solidarity with matrilineal descent within each phratry, and as the moiety principle is a later ritual contrivance, the above theoretical division of each phratry did not occur. It would have caused a ritual division within each phratry. Instead, the moieties were adopted in matrilineal fashion, so that the solidarity of the phratries remained.

PHRATRIES AND SUBSECTIONS IN WESTERN ARNHEM LAND

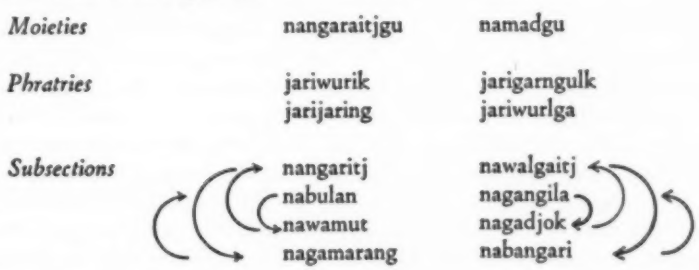
This is true also of the adjustment to the phratries of the subsection system which spread comparatively recently from the south into Arnhem Land, though

not into the Daly River-Coburg Peninsula corner. The solidarity of the matrilineal phratries and of the matrilineal moieties has remained intact. Two matrilineal cycles, each of four subsections, have been correlated with the two moieties and, therefore, with the two phratries in each of these. But as each phratry is its own matrilineal line, a four subsection cycle becomes included in it; and further, the same four subsection cycle appears in each of the two phratries of a matrilineal moiety. To use symbols (the sign = denotes intermarriage; the arrow, mother-child relationship: thus A^1 marries B^1, and the children belong to sub-section D^2):



The matrilineal cycle A^1 C^2 A^2 C^1 A^1 appears in both M and N phratries, and so too with the other cycle and phratries O and P.

The terms in the region are:

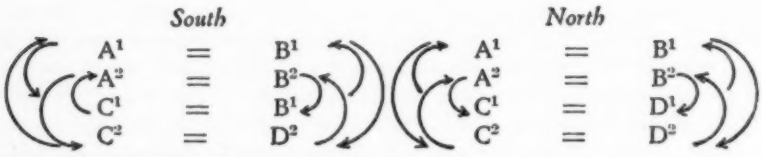


The moiety and subsection terms in this western Arnhem Land region have been known for some years; the phratry organization was recorded by Mr R. M. and Mrs C. Berndt during field work in 1947 for the Australian National Research Council. I thank them for putting their well organized material at my disposal. They reported also a fifth or recently introduced phratry, coming from the Jiwadja-Kakadu area, outside the subsection and moiety region. It only turns up occasionally, but when it does it is regarded as of the Namadgu moiety and as including the mother-child subsections, nagangila and nagadjok, being half of the cycle of that moiety. Similarly, I learnt that a new phratry had

arisen in the Melville-Bathurst Island system. Thus, the number of phratries in a tribe is not fixed.

The spread of the subsections into these regions brought other problems. For example, as we have noted, south of the Daly, where the process was observed amongst the Murinbata, the natives were not sure how to correlate the subsections with their kinship. So too, in the northeastern corner, Yirrkalla, the older natives are not yet resigned to it; it is a complication they could do without.[11] Further, in the whole area, it has to be correlated with the practice of marriage with mother's brother's daughter, and in some tribes with father's sister's daughter also. This has tested the ingenuity of the tribes, but they have successfully worked out a correlation. Elsewhere, the functional value of the system was to reflect and uphold the prohibition of marriage between cross-cousins, by separating them in a special subsection from the second-cousins who were the ideal marriage type. As descent was always indirect matrilineal, and provided that the marriages were of the regular type, and not of an alternate type sometimes allowed, a man and his son's son belonged to the one subsection. If, however, as in Arnhem Land, a man could marry his cross-cousin, or into the latter's subsection, and if this were consistently done, four marriages in the patrilineal line would have to be run before a man's descendant came back into his own subsection, namely, a man and his son's son's son's son. Amongst the Rembaranga, in the interior of Arnhem Land, I have found so far that this may be shortened by one step or by two steps, by men marrying into the appropriate alternate subsection. The lengthening of the patrilineal cycle is also the case in the Oenpelli district, western Arnhem Land, as it was also amongst the Nangiomeri and the Murinbata, between Port Keats and the Fitzmaurice River on the southwest of Arnhem Land.

The following tables, in which the now accepted symbols are used instead of the native terms, show the difference in the descent lines as working on the one hand in the region south of the Roper and Victoria Rivers, in which the marriage norm is between the *children* of cross-cousins, and on the other hand in the cross-cousin marriage region to the north.



11 Information from R. M. and C. Berndt. For the Murinbata, see below.

The succession of arrows at the sides shows the matrilineal descent lines. The patrilineal lines depend on whether the man marries into the subsection with which his own subsection intermarries according to the norm, or whether he marries into the usually allowed alternate intermarrying subsection. Put broadly, A's marry B's, and C's marry D's, but A's and B's do not marry with D's and C's, because this would mean marriage between succeeding generations, which becomes irregular when the subsection system is functioning. Normally, too, A^1 marries B^1, with B^2 as the alternative, and so on.

Granted adherence to the norm, in the south the patrilineal descent line is typically A^1-D^2-A^1, but in the north is A^1-D^2-A^2-D^1-A^1.[12]

The distribution of the subsection system, together with the variations in the names used for the eight groups, suggests that it was developed in the southeast of the Kimberley Division and spread fanlike southwest, southeast, east, and northeast. The Aborigines of Arnhem Land, amongst whom we have seen the system spreading, have regarded it as a complete scheme of eight intermarrying and descent groups, with an ideal pattern or norm, which they learnt as a formula, names and all.[13] This occurred at intertribal meetings or through less formal contact. Thus, they can recite that A^1 marries B^1 and the children of a B^1 woman belong to D^2, and so on, using, of course, the actual names of the subsections or their attempts to say them.

Then comes the problem: if the local tribe has practised marriage with mother's brother's daughter or a woman classified with her, she would, in the case of a man of A^1, belong to B^1; but if the tribe prohibited marriage with father's sister's daughter, how could that be expressed in the system, for she too would belong to B^1, because her mother would be of the same relationship type and in the same subsection as the mother of mother's brother's daughter? Again, what is the use of the subsection B^2, if the tribe has not hitherto distinguished in terminology between mother's brother's daughter and mother's mother's brother's daughter's daughter, either of whom was eligible as a wife? Or how correlate

12 A. P. Elkin, *Marriage and Descent in East Arnhem Land* (Oceania, vol. 3, no. 4, pp. 412-416; and appended note by W. E. H. Stanner, pp. 416-417).

Significantly, informants in the northeast, when explaining how marriages with mother's brother's daughter are arranged from generation to generation in one lineage, without any reference to subsections, use four kinship terms for a man and his descendants in the direct male line: katu, son; gudara, son's son; and bapa, son's son's son; the next, son's son's son's son, being wauwa, brother, and therefore being identified with Ego, and probably in his own subsection, if such a division be used (analysis of material obtained by Mr R. M. Berndt).

13 In some parts it was also definitely associated with totemism, that is, each subsection had one or more natural species classified with it. The importance of this aspect, however, has not been determined.

the subsection marriage pattern with marriage with mother's brother's widow, with "daughter," or with cross-cousin's daughter and other cross-generation marriages as in northern parts of Arnhem Land, or how use it when marriage had hitherto been arranged chiefly on principles of moiety and clan exogamy with kinship playing a very small prohibitory or preferential function, as in far northeast Arnhem Land?

I have examined the carefully recorded genealogical material obtained by Mr and Mrs Berndt and discussed the problem with them. The upshot is that the Aborigines in this corner, are living a "double life." They marry according to the old rules of moiety and clan exogamy, the kinship terms expressing the behavior relationships prevailing at any one time. With no sections or other generation level device, the marriage can be between persons of succeeding genealogical levels. Therefore, a "sister's" daughter or a "father's sister" may become a wife, or a man takes as a wife, at first not actual, but only in custodianship, a girl who is betrothed to his son. He had called her son's wife, but now she is wife, while the son who is waiting for her calls her "mother." Later on, if she does not become too much attached to his father, or else after his father's death, the son will take her to wife and call her wife.[14]

Obviously, a formalized eight group system will seem incompatible with such possibilities of marriage and such changes of terms. But the system comes, and does so as a system. For example, a man of ngaritj knows that according to the pattern he should marry a woman of balang subsection, whose children will be bangardi. He knows that balang includes both his own cross-cousin as well as children of his parents' cross-cousins (who in the southern system belong to separate, but marriageable subsections), and as he also knows that a kela includes the same types of relations, he accepts the principle that he can also marry into that subsection and so have koidjak children.

This means that our ngaritj man's choice is limited to certain women in two subsections, that is, to half of what it was before the introduction of the subsection system when moiety exogamy defined the limitation. Possibly the degree of polygyny practised might make the observance of such increased restriction somewhat difficult.[15] So, in spite of the new system, ngaritj looks around the camps, and according to the old custom, which is still fundamental, he sees many more women whom he does or could call wife. They are not in his moiety or

14 Similar liaisons and marriages were noted by W. L. Warner, *A Black Civilization*, pp. 72-83.

15 The average number of wives per middle-aged married man was and is over three (3½) (Warner, *op. cit.*, p. 77).

local totemic clan, nor in his linguistic sub-grouping which is important in his social life. Apart from that, whatever be their genealogical relationship to him, they could become his wives, if the necessary agreements with their people can be made, or if they were successfully taken. Further, he does marry one or more of them, probably with little thought of conforming to the new subsection scheme. Rather, it must be manipulated to conform to his action, and to his moiety and clan organization.

For example, the ngaritj man might marry a woman who is genealogically a classificatory mother, and the subsection of her mother (bulain) determines her subsection as wamut. According to the subsection pattern, this is a wrong marriage, but in the present stage of adjustment, it is not necessarily a matter of prohibiting or dissolving the marriage, but rather of altering subsections. So, the wamut woman might be regarded as kela, the alternate intermarrying subsection for a ngaritj man; his children by her will then be in koidjak, a subsection of his own moiety, and of course he calls her wife. This rearrangement of the subsections and kinship terms is accepted generally. The woman's subsection by descent, and her genealogical relationship to the ngaritj man are well known: they are "outside" terms. In addition, her new subsection and kinship position are recognized; they are "inside" terms. In a few cases of marriage which are irregular according to the subsection scheme, the woman's subsection might not be altered, but the man's children by her are put in the subsection to which they would have belonged had he married according to norm. This, of course, keeps his children in his own moiety, which is important for ritual. It does not mean that the child of a man of a certain subsection must belong to another definite subsection, but rather that his wife is regarded as of the child's correct mother subsection. He could have regarded her as belonging to the alternate subsection into which in this region he could marry, for his child would still belong to his own moiety, though to another subsection. Thus, our ngaritj man could make the children of his wamut wife either bangardi or koidjak, according as he considered his wife balang or kela. In either case they would be in his patrilineal moiety, yiritja, into which, as we shall see, the subsections ngaritj, bulain, koidjak, and bangardi have been grouped.

The following table shows the arrangement of the subsections of this area

according to the introduced norm of marriage and descent. There are special terms for the group of females in each subsection, but to simplify matters, they have been omitted.[16]

Many cases of adjustment or alteration of subsection affiliation could be quoted. The interesting point is that such adjustment is not considered wrong or untoward, except by a few very modern individuals, who have accepted the theoretical implications of the new system for kinship classification and marriage. It is symptomatic of the present state of the diffusion process. I have no doubt that in time marriages and kinship would be regularized in conformity with the subsection system; it might even lead to a lessening of the high degree of polygyny which prevails amongst the older men, but this process will now be aided by missionary influence. Such regularizing would reduce the possible choice of wives from all four subsections of the opposite moiety to two of them, thus halving it.

Whether or not it would result in the complete prohibition of cross-cousin marriage is doubtful. So far, this has not occurred in the Rembaranga tribe on the west of these northeastern Arnhem-landers, nor amongst the Gunwinggu of western Arnhem Land (Oenpelli district), nor completely amongst the Maung of Goulburn Island, in spite of the kinship system of the latter being now of the type usually correlated with the prohibition of own cross-cousin marriage.

In neither of these western Arnhem Land tribes are kinship and marriage yet adjusted fully to the subsection system. When the latter spread there is not known, but it was between 1911 when Baldwin Spencer worked there and 1926 when W. L. Warner recorded the social organization. Thus: Maung informants made it clear that there are three types of subsection marriage in vogue; two of these are normal, namely into the regular and into the alternative intermarrying subsection, e.g. A^1 with B^1, and A^1 with B^2; the third is between succeeding generations and is into a daughter subsection. The statements recorded by Mrs Berndt are A^2 with d^2; C^2 with b^1, B^1 with c^1, and C^1 with b^1 (the husband's subsection is mentioned first in each case).

16 The norm is for ngaritj to marry balang, his cross-cousin subsection, and alternatively into kela, where he would also find cross-cousins if his mother's brother (wamut) had married into his alternate wife subsection, that is bangardi, instead of koidjak. He might also find mother's mother's brother's daughter's daughters in both these subsections; they would be in balang if his mother's mother's brother, bulain, married into his preferred subsection, kela, but kela, if he married into balang, his alternate intermarrying subsection.

It should be noted that in the adjustment of subsections to cross-cousin marriage, mother's brother's daughter and mother's mother's brother's daughter's daughter are in the same subsection, and not in separate ones as is the functional effect in tribes where cross-cousin marriage is prohibited and the kinship terms express this fact (*Vide* A. P. Elkin, *The Australian Aborigines*, 1948, pp. 60-64).

The significance of these marriages, which are not regarded as basically wrong, will be made clearer by repeating the table of subsection symbols:

In marrying a woman of d^2, a man of A^2 is marrying a woman in the subsection of his father's sister and one classified with her. This follows because his mother belongs to c^2 and his father, according to the normal intermarrying rule, belongs to D^2, to which therefore his father's sister also belongs. The same is true of the marriages of C^2 with b^1 and B^1 with c^1. The only difference with the fourth case is that the mother of C^1, that is a^2, married a man from her alternate intermarrying subsection, B^1, so that b^1 is father's sister to C^1. The Gunwinggu also allow this marriage with the "father's sister"; for example, D^1 marries a^2. The father's sister is not the sister of one's own father, but may be mother's brother's widow.

The same marriage is reflected in the use of some kinship terms between members of subsections. Thus, a Maung man of A^2 calls B^2 either wife, which is normal and obvious, or father's sister: the latter results from the marriage of B^2 into his father's sister's subsection C^2 (his mother's being D^2), and therefore having children of A^2. This occurs also amongst the Gunwinggu.

So too, with the use of one term, ngawin, for father's sister's son (and the son of mother's brother, her husband) and own son; if a man marries a "father's sister," his and her son are the same.

Such cross-generation marriage cannot be correlated with the subsection system, but these tribes are prepared to ignore this, for the marriage recognizes the exogamy of both the matrilineal moiety and phratry, expresses the custom that either phratry of one moiety may marry into either or both of the phratries of the other moiety, and leaves the children in their correct moiety and phratry according to matrilineal descent.[17] Thus, this marriage with the "father's sister" is continuation of the pre-subsection custom.

A similar state of initial confusion was evident in the Murinbata tribe in 1934. There were patrilineal moieties and the kinship system was of the cross-cousin marriage or Kariera type, though own cross-cousin marriage was prohibited: a person's *own* cross-cousin was classified with mother and mother's brother. The

17 Reference back to the tables of moieties, phratries, and subsections will make this clear.

subsection system had been recently introduced from the south, and with it some kinship terms, for example, a term for own cross-cousins who should not be married; thus, the term for mother need not be used in two subsections and for members of succeeding generations as was the case when no generation level device had to be observed. Likewise, new terms for wife's father and wife's mother's brother were being used. The Murinbata, however, like the Arnhem-landers were not distinguishing the cross-cousin type of relations who could not be married from the second cross-cousin type who were eligible in marriage, by putting them in two separate subsections. However, the new formula of marriage and descent is learnt parrot-fashion and seems authoritative, and though the Murinbata do not recognize any superiority of preference in $A^1 = B^1$ marriage to $A^1 = B^2$ and so on, they feel that the children of women by B^1 and B^2 should be D^2 and D^1 respectively, according to the southern arrangement of the subsections. But some marriages which are irregular by the new subsection system, though not necessarily wrong by the older custom, cause much argument: the formal pattern would put the man's children from his wife outside his own moiety, and this is maintained by some; others, however, insist that no irregular marriage should prevent his children belonging to his own moiety. It is probable that the combined influence of the prior patrilineal moieties and of the recent indirect matrilineal subsections will minimize the number of cross-generation marriages or marriages between distant brothers and sisters; and further, because own cross-cousin marriage is prohibited, the introduction of new terms will turn the kinship system into one of typically Aranda type, with four named lines of descent.

In the meantime, however, the Murinbata (and the related Nangiomeri) were adjusting the subsection system to the cross-cousin type of kinship system in the same way as in northern Arnhem Land: they were lengthening (normally doubling) the line of subsections by which a man's descendants in the male line "return" to his own subsection.[18]

---

18 W. E. Stanner, *Murinbata Kinship and Totemism* (Oceania, vol. 8, no. 2, pp. 197-214).

I have omitted the Wandilyaka of Groote Eylandt from this discussion, for their social organization has not yet been adequately studied. The few genealogies and other information which I possess suggest that the kinship system was correlated only with moieties, and so allowed cross-generation marriages; indeed, it was possibly much like the Ungarinyin system (Elkin, *The Australian Aborigines*, pp. 67-70). In recent years, it has been complicated and modified by the diffusion of the matrilateral cross-cousin system of the Nungubuyu from the mainland of eastern Arnhem Land. I do not think it had an Aranda system as Warner maintained (*Kinship Morphology*, p. 68, footnote).

The tribes at the mouth of the Roper, like the Wandaran and Mara, possess the Aranda type of kinship with semi-moieties.

MOIETIES AND SUBSECTIONS

There is one interesting difference with regard to subsection arrangement in western and northeastern Arnhem Land. In the latter, the subsections, though indirectly matrilineal in descent as always, and indeed because of this fact, have been correlated easily with the moiety system, which there is patrilineal. The latter did not have to give way to matrilineal phratries, but only to be correlated with localized patrilineal groups. Those moieties are widely known as dua and yiritja, and in spite of variations in the names of the subsections in the east and south of Arnhem Land, their equation is always clear and their division amongst the two moieties consistent. But in the Goulburn Island-Alligator-Liverpool district, with its matrilineal phratry basis, the correlation is different. A comparison of the tables with the subsections arranged in moieties shows this:

Western Arnhem Land

Matrilineal moiety	nangaraitjgu		namadgu
Subsections	nangaritj	=	nawalgaitj (nawaitj)
	nabulan	=	na (ga) ngila
	nawamut	=	nagadjok
	nagamarang	=	nabangari

Northeastern Arnhem Land

Patrilineal moiety	yiritja		dua
Subsections	ngaritj	=	balang (or waitban)
	bulain	=	kela (or kangila)
	koidjak	=	wamut
	bangardi	=	kamarang

The Oenpelli men equate nangaraitjgu to yiritja and namadgu to dua. This means that whereas four of the equivalent subsections in either district remain in the same (or equivalent) moiety, the other four change moieties. In other words, a wamut man is nangaraitjgu (or yiritja) at Oenpelli, but dua (or namadgu) amongst the Rembaranga and other tribes.

[Between the writing and printing of this article I made my fourth visit to southern and south-central Arnhem Land, August, 1949. I observed that the

Djauan had now adopted the eastern Arnhem Land moiety terms in their ritual organization—probably the result of the mixing of tribes in marriage, in rituals, and in employment. In 1947, moiety terms were not used. The northern Djauan, however, use the matrilineal moiety organization and terms of *western* Arnhem Land.

More interesting still is the regular use by the Ngalgpun, the northeastern neighbors of the Djauan, and also by the Rembaranga and their northeastern neighbors, the Djinba, of both the patrilineal ritual organization, dua and yiritja, and also a social moiety organization of rewandji and madawara, the equivalents respectively of nangaraitjgu and namadgu. Their subsection terms are those of northeastern Arnhem Land, and the equivalent of the two sets of moieties is as given above. Each person belongs to two moieties; thus, a kamarang is dua and madawara (namadgu), and so too in the case of a wamut. A ngaritj and a bulain, however, while being madawara, are yiritja, not dua. So too, while balang and kela are dua and rewandji, koidjak and bangardi, while being rewandji, are yiritja, not dua.

In all subsection systems, with normal rules of marriage and descent, even when there are no named moieties, we can theoretically distinguish the operation of both the patrilineal and matrilineal principles of descent, the latter being fundamental. In central Arnhem Land, however, these principles are overtly recognized and are functioning in social and ritual life. This reflects the position of the Rembaranga, and its "company" on the northeast (the Djinba) and on the southwest (the Ngalgpun), as buffers and middlemen between eastern and western Arnhem Land.]

LOCAL ORGANIZATION

As we have seen, the three elements in western Arnhem Land—the moieties, phratries, and subsections—are matrilineal. There is, however, another factor, which is patrilineal. Great credit is due to Mr and Mrs Berndt for detecting it. The namanamaitj, as it is called, was the original small patrilineal, patrilocal, exogamous, land-owning group, the members of which shared in a common inheritance of personal names. Since the days of Macassan contact, a feature of coastal Arnhem Land history, displacement of tribal groups has been in process; some matrilocal marriage has occurred, and individuals have grown up regarding their mother's language as their proper language, and the tribe speaking this as their own tribe. Amidst this change and confusion the Aborigine has maintained the namanamaitj line—this is, the link with his original local country in the male line, and the preservation of its exogamy. In all cases recorded, with one exception,

no man had married into his own namanamaitj, nor that of his mother (or mother's brother), while his own mother's and his wife's mother's namanamaitj are different.

One simplifying feature of social organization in western Arnhem Land is that each tribe is a social and linguistic unit, and the moieties, phratries, and subsections are subdivisions within it. In northeast Arnhem Land, however, the set-up is more complicated and more fluid. Exogamous patrilineal moieties and clans are straight-forward, if they be subdivisions of some known total social and linguistic unit. But that is not the case in this sub-region. The whole of the territory is divided amongst a number of patrilineal clans, each with its own totems, sacred symbols, ceremonies, and waterholes, some of the last being sacred "wells." Each clan, however, includes a number of sub-groups of differing linguistic affiliation. Sometimes the differences are only what the natives describe as "heavy" and "light" tongue. In some cases the differences are definitely dialectic. A clan, therefore, is not a linguistic unit.

On the other hand, while a linguistic group is a unit in speech, it is not so in locality, nor in clan affiliation, for it is usually spoken by parts of more than one clan. There is, however, a bond or alliance between linguistic sub-groups of one clan, and each language group marries preferably into certain language groups of the opposite moiety. This criss-crossing of local clans and linguistic units lessens the solidarity of the clan, a process which is also served by the frequent attachment of a person to the "language" of his mother and mother's brother, a tongue which belongs to a clan, or part of a clan, of the moiety to which his own (and his father's) clan does not belong. And this in spite of the fact that the linguistic group (mata), like the clan (mala), is patrilineal.

Another factor adding to the complexity is that a clan may obtain a piece of country in the territory of another clan, even of the opposite moiety. Moreover, the traditional home territory of one clan is sometimes situated elsewhere than it is today. This may explain why the linguistic group is felt to be more important than the clan.[19]

The local organization in many tribes is not the clearcut patrilineal patrilocal

---

19 A brief discussion is given by Warner (*A Black Civilization*, pp. 36-39), with a list of clans and languages, with totems, as collected at Millingimbi (pp. 39-51). The complete analysis must await the publication of the detailed material collected by Mr and Mrs Berndt from the Yirrkalla side. Warner's use of the term Murngin to denote the whole people has been criticized by Mr Webb (*Tribal Organization in Eastern Arnhem Land*, Oceania, vol. 3, no. 4, p. 410) on the grounds that it is the name of a clan of one moiety. Mr and Mrs Berndt say that these people from Blue Mud Bay west to the Goyder and up to and around the coast regard themselves as the Wulamba.

exogamous group occupying a definite territory which some textbooks imply. Actually it is not an easy subject to study in the field if tribal life be still fairly strong, especially in a region where life is economically easy and there is much coming and going.

Melville and Bathurst Islanders seem to conform to the textbook definition until we realize that a man can easily change his local group or horde by residence or initiation, or both. He will henceforth be regarded as a member of the local group into which he transferred, and into which he may marry, so that for practical purposes marriage is endogamous.[20] As already stated, the Wagaitj tribe consists of three named groups each with its own country, but there is no evidence of the exogamy of these groups. Likewise, Dr Stanner could not find confirmation in the Daly River region of the textbook description of local organization. The hordes were not exogamous, the boundaries fluid, and there was much intermingling. Amongst the Murinbata at Port Keats, too, he concluded that the hordes were aggregates of contiguous local totemic clans, which centered around totemic sites, but were not exogamous, though the clans were.[21]

CONCLUSION

The picture we get from the foregoing is one of change, diffusion, complexity, and some perplexity, as well as of variation according to regions. This would be seen again if we surveyed the ritual life of the region: there is diffusion of circumcision and, much more slowly, of subincision, both from the southwest; of some "fertility-mother" cults eastwards from the Coburg Peninsula area, and the great Kunapipi ("mother-fertility") cult north from the Victoria and Roper River districts; concepts of "earth-mothers" and cult-heroes as the source of natural species in the non-moiety, uncircumcised sub-region in the northwest; and a variety in burial rituals, the most interesting of which is the final "burial" of the bones in a log coffin which is practised around the coast from the Liverpool River east and south to the Roper River up which it has spread—it has also recently spread west to Goulburn Island.

This region, then, has not been culturally static, at least not for a considerable time. Confining ourselves to social organization, we see that cross-cousin marriage was formerly allowed over most, if not all of the region, and indeed was a preferred type in much of it. In the northwestern corner—a sub-region—an absence

---

20 C. W. M. Hart, *The Tiwi of Melville and Bathurst Islands* (Oceania, vol. 1, no. 2, pp. 173-176).

21 W. E. H. Stanner, *The Daly River Tribes* (Oceania, vol. 3, no. 4, pp. 403-405) and *Murinbata Kinship and Totemism* (Oceania, vol. 7, no. 2, pp. 188-190).

of moieties and of generation-level devices allows other types of marriage which would be regarded as highly irregular, or indeed, impossible in regions with sections or subsections. Without these devices, however, they are within the limits of normality or regularity. Matrilineal phratries, which may increase in number, function in the northern part of this sub-region.

This sub-region overlaps, because of the phratry organization, with the Alligator-Liverpool Rivers sub-region, which is strongly matrilineal. Named moieties were established there before the subsection system spread to it, a system which so far has to be accommodated to the prevailing kinship and phratry, or moiety, and marriage custom, and not vice versa.

This accommodation of the subsections to established kinship, moiety, and marriage practices is still obvious in the eastern patrilineal sub-region, where there was no generation-level mechanism. In neither of these sub-regions is the breaking of the subsection norm regarded as a serious matter. Subsections add difficulty here as they do amongst the Murinbata in the southwest corner of the region.

A survey of the region suggests that moiety exogamy and descent are much more important than the subsection pattern; and that more basic still is clan or phratry exogamy and descent, be this patrilineal, as in eastern Arnhem Land and also south of the Daly River, or matrilineal as in the western sub-region; but whether local exogamy was as fundamental or more so, is uncertain and will depend on what is meant by locality in each case. This may be the total food-gathering territory of a group, or a much smaller locality which is really a sacred place connected with their own spirits or with the ancestral heroes of the group. It may have been the case in eastern Arnhem Land, though even in this patrilineal, patrilocal sub-region, the local organization was far from stable. In the Alligator or western sub-region, the namanamaitj suggests that exogamy of a small patrilineal group was formerly important, but the area concerned was probably very small, and not a total hunting region. This was the case, as far as Dr Stanner could determine, in the Daly River area. In the northwest corner, there are fairly large local divisions, but exogamy is not necessarily a feature of them.

Thus, in this good food-gathering region with a comparatively thick population and many tribes or linguistic groups, in which a family or an enlarged conjoint family could live on a small area, there was much meeting and mixing of such groups, with fluidity of boundaries, and even changes of clan countries.

The picture is different in the arid and semi-arid regions where enlarged family groups or local clans require a much greater hunting area, and consequently are separated much more and for longer periods from other groups. In such a situa-

tion, marriage is really into an outside group—one comparatively far off, only met on special visits and on ceremonial occasions.

Finally, in addition to the three main sub-regions—the northwest corner, the west, and the east, to which a fourth, the Fitzmaurice-Port Keats area should be added—there is the Roper River sub-region in which either the subsection or else the semi-moiety system is completely in the ascendant, along with an Aranda type of kinship system, and a high degree of conformity to the marriage norm. Apparently, the subsection system, in spite of causing initial confusion, eventually wins its way in a tribe, and establishes conformity to its pattern of marriage and descent, especially as it allows for an alternate marriage. Eventually too, it tends to increase the number of kinship terms, dividing them into eight groups, and to establish marriage between the children of cross-cousins, own or classificatory, as the preferred type.

The practical value of the system at intertribal gatherings in the conduct of both social and ceremonial affairs is realized. Prestige is also involved: once the system has been introduced to a tribe, its members like to show that they can make it work. Perhaps, too, the very pattern of the system with its cycles and lines appeals to the native mind. This will be studied further in the field.

University of Sydney
Sydney, Australia

EARLY HISTORY OF AGRICULTURE IN MIDDLE ASIA[1]

HENRY FIELD AND KATHLEEN PRICE

STRABO (VII, 3, 9) quotes the following words of the Greek poet, Cheril of Samos, whose works belong to the last decades of the fifth century BC: "And the shepherds of sheep, the Sacae, were in origin Scythian, but they settled the rich wheatlands of Asia and were doubtless emigrants from the lands of the nomads." These lines of Cheril were borrowed by Strabo from the historian Ephor, for the characteristics of the Scythian tribes to which the Sacae belonged. The words of Cheril are citations from a work of his that is not preserved, containing epic descriptions of the Greco-Persian War during which the Sacae became a part of the Persian armed forces.

For us the excerpt from Cheril is interesting, not only because it recalls one of the Middle Asiatic peoples, but still more because in the words of the Greek poet, the country of the Sacae of Asia (Cheril calls it by its Greek name Asida) is described as a granary, as a country producing wheat. Obviously, the information at the disposal of the Greeks during the fifth century BC concerning Middle Asia designates this region not only as a country settled by nomadic cattle-raisers, but as a country of developed agriculture.

In which regions of Middle Asia sprang up the very earliest centers of agriculture? According to the opinion of several investigators (V. Geiger and A. Herrmann), one of the most ancient cultural regions of Middle Asia, including the region of the most ancient agriculture, is the land of the lower reaches of the Amu-Darya, that is Khwarazm. Herrmann expresses this thought thus:

> At the time when in the surrounding steppes there lived only nomads, in the confines of the present Khiva, on the banks of the river, people changed early to the settled mode of life and began to occupy themselves with agriculture and to build irrigation canals; there is reason to suppose such a picture here as in ancient Mesopotamia.

As witness to this situation, Herrmann refers to the medieval Khwarazmian

---

1 Translated by Kathleen Price and edited and summarized by Henry Field from the article by G. F. Gaidukevich in Vestnik, no. 3, pp. 193-204, 1948. According to the *Bolshaia Sovetskaia Atlas*, 1947, Middle Asia (Srednia Asia) comprises the Kazakh, Uzbek, Turkmen, Tadzhiz, and Kirghiz SSR. Central Asia (*Tsentralnia Asia*) is not defined in this Encyclopedia. According to Lobanov-Rostovsky this term has always referred to a region outside the U.S.S.R., e.g., Sinkiang, Afghanistan, Mongolia, Dzungaria, i.e. Inner Asia. For previous references see *Recent Archaeological Discoveries in the Soviet Union* (Southwestern Journal of Anthropology, vol. 5, pp. 17-27, 1949: nb. footnote 1).

scholar Al Biruni, who in the Chronicles of the eastern peoples compiled by him, ascribes the settlements of Khwarazm to 1292 BC. This attests to the existence among the peoples of Khwarazmian of traditions referring to the early development of a settled way of life.

In this same sense should be interpreted the legendary country of Airianem-Vaedzho mentioned in the Avesta as "the first habitation of blessing and abundance," situated in a zone of severe winters and fed by some large river. On the basis of various deductions, a number of scholars have identified Airianem-Vaedzho with Khwarazm, strengthening thereby the opinion concerning the antiquity of the existence of settled agrarian culture in that area.

Recent archaeological investigations at Khwarazm under S. P. Tolstov have led to the discovery of settlements attributed to the end of the fourth-third century BC. This region was populated by settled hunters, mostly by fisherfolk. Study of one of these sites (Dzhanbas-Kala No. 4) permits one to clarify the picture of the life of the primitive inhabitants, settled for the most part along the tributaries of the river and beside reservoirs. They lived in primitive huts made of wood and reeds, occupying themselves with catching river and lake birds, hunting wild animals, and using for food tortoises and steppe rodents.

During the next stage of the Bronze Age (second millennium BC), there is reason to suppose a rudimentary agriculture combined with cattle-raising. People even then continued to live on the sand-dunes along the banks. However, at that time they were evidently already carrying on agriculture on the narrow littoral in the form of sowing on non-artificially irrigated fields. Such sowing was possible thanks to the high-standing soil water in the strip near the river, and owing to natural reservoirs which guaranteed the minimum moisture essential for cereals. Evidently a considerable rise of the level of water in the reservoirs, which occurred at the end of the Bronze Age, produced a temporary flooding of the settled points. After the fall of water, life was again resumed there. All the same, at the beginning of the Iron Age (first centuries of the first millennium BC), agriculture remained primitive, and was carried out on the silty beds situated on the narrow littoral strip. There were still no irrigation constructions. This is confirmed by the fact that the settlements of this period were situated far from the large canals which sprang up later. Extension of the area of tilled land in the direction away from the Amu-Darya and its tributaries could have arisen only on a foundation of artificial irrigation.

Investigation of the watered lands on the right bank gave Tolstov foundation for assuming that the beginning there of the construction of a large irrigation

system goes back approximately to the first half of the first millennium BC. From this time an agrarian culture developed in this large oasis at Khwarazm.

Meanwhile, in Middle Asia there are regions where the birth of agriculture occurred at least 1,000-2,000 years earlier. It may be asked what hindered a much earlier development of a settled agriculture on the land bordering the Amu-Darya, which it would appear, might have been irrigated by this huge river artery of Middle Asia and thereby might have become at a very early date a considerable agricultural oasis? The reason for this is the natural physical peculiarity of the Amu-Darya, which is inherent in some degree in all the large rivers of Middle Asia. The Amu-Darya has a very steep slope to its bed: its mountain sources are situated at 3,700 m higher than the level of the Aral Sea into which the waters of the Amu-Darya flow. As a result the current is exceptionally swift and strong, an observation recorded by those taking part in the campaign of Alexander of Macedon, who experienced great difficulty in building a crossing. The curbing and control of such a river was not within the capacity of primitive man.

After mastering the lands on the lower course of the Amu-Darya, the inhabitants were forced to expend hard work not only on digging the canals but in their maintenance. The considerable fluctuation of the level demanded measures to protect the cultivated land by special levees, the breaking of which threatened the inundation and destruction of the settlements and the planting. As result, the use of the Amu-Darya for the development of agrarian culture became possible in comparatively late times when experience in agricultural irrigation was already accumulated in other regions with more favorable natural conditions.

Remains of the earliest agriculture in the territory of Middle Asia were disclosed in 1904 near Ashkhabad in the foothills of Kopet-Dagh, one mile west of Anau, where two mounds were discovered representing the remains of the settlement. The many cultural strata contained ruins of buildings made of unbaked brick. The oldest settlement belongs to the Eneolithic period, attributed to the third millennium BC. In addition to flint arrowheads were many polychrome sherds of vessels made without the potter's wheel. In the clay paste of several clay vessels and unbaked bricks were found impressions of straw and charred seeds of wheat (*Triticum vulgare*) and double-rowed barley (*Hordeum distichum*). Pumpelly was inclined to consider Anau as the most ancient center of agriculture and cattle-raising from which these developments diffused into Mesopotamia, the Nile valley, and the Mediterranean area. Rejecting in part the opinions of Pumpelly insofar as they were a product in the first place of the

incorrect dating of the ancient settlements of Anau (Pumpelly referred Anau I to the ninth-seventh millennia BC), nevertheless, it must be recognized that the Anau settlements represent the most ancient monuments of agrarian culture in Middle Asia.

The location of the oldest settlements in southern Turkmenia shows that agriculture developed in the foothill zone where was first possible the so-called estuary or marsh type of irrigation, which did not demand complicated technical measures. This method of primitive cultivation has been retained among the Turkmens in the region of Sumbar and Kuren-Dagh. In general, small areas at the foot of marly slopes were selected for sowing; during the autumn rains small streams flow from these slopes, giving a small amount of moisture, sufficient nevertheless to dampen the sown areas at the foot. The water running down the slopes contains a large amount of silt rich in lime. A small ditch is dug around the field to conserve the moisture from the spring rivulets. The process of sowing is simple: the grain is scattered on the marshy surface without even a preliminary tilling of the land, and then the grains are ploughed into the soil with a primitive wooden plough drawn by a pair of camels. The Kirghiz on the Ust-Urt in the lower reaches of the river Chegana sow even more simply: the seeds are scattered onto the wet silt, and a flock of sheep is driven over the field.

Primitive man could not cope with mountain torrents for irrigation. Hence the earliest agriculturists settled either in the regions of the silty foothill areas watered by small rivers and streams or along the lower parts of rivers which dry up, e.g. Murghab and Tedzhen. During high water, simple irrigational methods were developed. For example, the Eneolithic settlements at Anau were located at the end of the flow of the stream Kelte-Chinar. The kurgans at Gumysh-Tepe and Ak-Tepe on the lower part of the Murghab, at Karagan-Tepe on the lower Meana, and others (containing Anau ware) are located on the edge of oases where the overflow during flood season has lost its destructive power.

Observations on the oldest agricultural settlements in the foothills of Kopet-Dagh and the deduction of irrigation methods are strengthened by the data obtained in the northeast borderland of the Ferghana valley. Here, on the Kyzyl-Yarsk steppe adjacent to the hilly ridge, appeared remains of a large main canal, leading across the steppe from the slope of the mountainous ridge. The spring freshets flowing down the slopes were directed into this canal and then flowed across the network of waterways onto the fields adjacent to it from the southwest, where lay a number of ancient agricultural settlements.

In spite of the fact that the large river Naryn flows in the regions indicated, the earliest settlers irrigated their fields with spring mountain torrents and not

with the river. This is again explained by the fact that in the early stages the people were incapable of constructing irrigation systems based on the utilization of the water of a large swift river with its level changing considerably in different periods of the year.

At the present state of the historico-archaeological study of Middle Asia it is impossible to present a complete historical picture of the gradual development of agriculture throughout the entire territory. It is only possible to consider as established that the most ancient agricultural oases arose in the foothill region, which enabled the practice of agriculture with the simplest methods of irrigation created by natural conditions, as, for example, in southern Turkmenia, Ferghana, and beside the river Zaravshan, where remains of material culture of the Anau type were discovered.

Thus, only gradually could man pass over to agriculture under more complicated conditions along the channels of large rivers, where working the fields was possible only following the construction of dams and canals. At places beside large rivers an unirrigated simple type of agriculture, combined with a fishing-hunting economy, could develop at an early date.

By the middle of the first millennium BC, when information about Middle Asia had begun to penetrate into ancient Greek literature, agriculture had already passed through a series of stages. However, in addition to agricultural oases, large areas were ranged by nomads, and in such regions as the Jetty-Su [Seven Rivers], agriculture began to acquire importance from the early Middle Ages BC.

Herodotus gives almost no data about agriculture in Middle Asia, far from Greece. The knowledge of the Greeks about this region increased considerably as the result of Alexander of Macedon's invasion. Greek literature became enriched by new geographical information about Middle Asia. For the first time the Syr-Darya (Yaksartis) became known to the Greeks, although participants in the campaigns of Alexander were still mistaken in taking it for the Don (Tanais). Alexander, in the last year of his life, had the intention of undertaking a special investigation of the Caspian Sea.

It would seem that the above mentioned circumstances must have made possible the accumulation in Greek literature of information about the way of life of the people of Middle Asia at the time of Alexander. Actually such data are rare, for no complete writings of the participants in these campaigns have been preserved. They have come down only in the form of extracts, citations, and repetitions of much later writers (Strabo, Quintus Curtius, Arrian, and others), borrowed from original works of those authors which seemed to them important. Descriptions of the country and its inhabitants were given only as far as was

necessary as background for the outline of the action of the great conqueror and his army. Therefore, in the descriptions of the campaigns of Alexander which have come down to us, there are few data on the economic life of the settled agricultural inhabitants of Middle Asia. They mention towns and settlements without any description of their economy or mode of life; occasionally unusual features were recorded. For example, when describing Hyrcania, the fertile region on the southeast shore of the Caspian, this fertility was illustrated by the fact that here one vine yielded a metret (39 liters) of wine (Diod. XVII, 75).

Trade relations of the Mediterranean countries with the East accounted for a further stream of information about Middle Asia, its reflection being found in the works of Greek geographers (Martin of Tyre and Claudius Ptolomy) of the Roman period (second century AD). However, these data are basically geographical. In view of this, the writings of Chinese historians, from the time of Chan Tsian in the second millennium BC, form valuable supplements to Greek and Roman sources. This was at the time when the Chinese not only penetrated for the first time but entered into long cultural-political relations with Middle Asia.

Insofar as artificial irrigation forms the basis of agriculture, it would naturally be expected that in ancient literature we would find information about this remarkable feature, especially since it must have been new to the Greeks.

Sometimes, only in an indirect way, Greek writers give the reader to understand how great was the importance of river irrigation in Middle Asia. Arrian, describing the pursuit by Alexander of his opponent Spitania across the region irrigated by the river Politemet (Zaravshan), observes (Anab. IV, 6) that "where the waters of the Politemet disappear, there the country becomes a desert." At this point the western end of the river Zaravshan peters out into the sand beyond Bukhara Oasis. The geographical characteristic of this river, as described by Arrian, tends to emphasize one very important peculiarity of the nature of Middle Asia: regions deprived of river waters are desert.

Strabo characterizes the significance of the Zaravshan River in a more detailed way, borrowing the information brought to him by Aristobul. Having observed that across Sogdiana a river flows, to which the Macedonians gave the name Politemet, Strabo (XI, 11, 5) writes, "having watered this country, the river flows into desert and sandy soil where it is swallowed up by sand." Without doubt he has in view the irrigation of the cultivatable lands of Sogdiana situated in the valley of the river Zaravshan. Taking into consideration that this description of the river Politemet (Zaravshan) is borrowed from the work of a participant in the campaigns of Alexander, one must recognize in this extract an important

contemporary witness, who confirms the significance of calling the river a water-artery, feeding the irrigation canals of the Sogdians during the fourth century BC.

Herodotus (III, 117) relates the following:

> There is in Asia a plain enclosed on all sides by a range of mountains with five defiles. This plain formerly belonged to the Khwarazmians, and lay on the confines of the Khwarazmians themselves, the Hyrcanians, the Parthians, the Sarangaeans, and Thamanaeans: since the Persians have had the empire, it is the appurtenance of the king. Out of the basin formed by the mountain, flows a considerable river, called the Aces, which, at its commencement, divides into various directions, and waters all the lands of the above-mentioned nations, one of the arms flowing through each defile respectively. Since this quarter has been subject to the Persian monarch, the following changes have been wrought there: the king has thrown up dykes across each gorge, with flood-gates in each; the water, thus curbed in its course, converts the plain enclosed in the mountain into a deep sea; the river constantly discharging its stream into it, and having no longer any egress. Those who in former days were wont to use that water, no longer enjoyed that blessing, are exposed to a great calamity: in winter, the ground is refreshed by the rain from heaven, like other countries; but in summer, when they sow their millet and sesame, they suffer from drought. Receiving no boon of water, they go themselves, and their wives, into Persia, and, standing at the palace-gates, scream and moan. The king orders the flood-gates to be thrown open that lead into the lands of the suppliants; and, when the ground is soaked through with water, shuts them again, and orders other sluices to be opened for the rest that want particularly. These, I am informed, are not opened before a large sum of money has been extorted, over and above the tribute.

This information from Herodotus, confirmed evidently from Persian sources, is significant primarily because it confirms the existence in Middle Asia, already at the time of the first Achemenids, of agriculture based on a complicated irrigation technique. Investigators, who were concerned with the account of Herodotus, all agree that, with all the legendary coloring of the story and its background of characteristically eastern color, it deserves credence. The most pertinent fact from the historical point of view is that the Persian king comes forward in the story of Herodotus as an active distributor of the water resources of the country. Herodotus states clearly that the Persian king specifically constructed dams, transforming the valley within the mountains into a lake-reservoir, by which later was regulated the distribution of irrigation water.

It is more difficult to understand the information of Herodotus in the concrete geographical framework of Middle Asia, the main difficulty being the impossibility of identifying the river Aces with any Middle Asiatic river. The theory has been put forward that the Aces was the Amu-Darya. In support of

such an identification could be cited the proximity of the so-called river Aces to the ancient Iranian name Amu-Darya (Vakhsh), which, in the works of Greek authors is changed to the form Oxus.

In recent times Tolstov has ventured to identify the Aces with the Amu-Darya in connection with his investigation of ancient Khwarazm and the ancient irrigation of the Khwarazmian lands. However, in the narrative of Herodotus there are details which hinder the identification of the river Aces with the Amu-Darya. According to Herodotus, it is situated in the mountain plain, where a lake is depicted extant after the Persian king constructed a dam, and is on the border of the possessions of the Khwarazmians, Parthians, Sarangeans, and Thamaneans. All these peoples used the waters of the same river. It could scarcely be the Amu-Darya, if one takes into consideration the places settled by the above-mentioned peoples.

The allusion to the Parthians refers to southern Turkmenia; the main territory of the Hyrcanians was situated on the southeastern shore of the Caspian, south of the river Atrek. The region of the Sarangeans, called in works of ancient authors Drangiana (later Sakastan, present Seistan), is localized in southwestern Afghanistan, in the region of the lower reaches of the river Gilmend (ancient Etimandr).

The Thamaneans lived in the neighborhood of the Sarangeans, judging by allusions to the former in Herodotus (III, 193) in the list by the Persian satraps.

V. V. Barthold considered that, as regards the river Aces, "the details of the story of Herodotus scarcely permit seeing in this narrative the words of a person well-acquainted with the geographical conditions of the country."

Barthold came to this negative conclusion as a result of the impossibility of finding a satisfactory explanation of how all the peoples mentioned by Herodotus could use one and the same river for the irrigation of their lands. In any event, the Amu-Darya is not the river in question. For this reason, it was suggested, first by Tomashek and then by other investigators (Westberg, Herrmann, and Kissling), that the river Aces is the present river Gerirud; in its lower reaches in southern Turkmenia it bore the name Tedzhen.

Herat Oasis is dependent upon the Gerirud for its fertility now as in the past (Strabo, II, 1, 14; XI, 10, 1), when it represented the basic core of the region Haraeva (Aria).

In confirmation of the hypothesis of identifying the Aces with the Gerirud-Tedzhen, the closeness of the names Aces to Oxus, the ancient name of the lower course of the Gerirud, has been pointed out. The most substantial argument for the identity of the Aces with the Gerirud-Tedzhen has been given by

Kissling, who comments that in his opinion the Persian king built the dam a little to the north of the bend of the Gerirud. Evidently the dam was constructed in the narrow mountain gorge. As to the plain within the mountains, which became a lake after the building of a dam, that plain might have been the mountainous valley of Gerirud in the region of Herat. Such an interpretation of the data given by Herodotus could possibly be strengthened by the following considerations. According to Hekateus, Hyrcania and Parthia were bordered on the east by Khwarazmian possessions. From there, it has been deduced, not without foundation, that the possessions of Khwarazm from the sixth century BC to the Persian Conquest, were not limited to the region of the lower reaches of the Amu-Darya, but evidently spread out far to the south, right to the valley of the river Gerirud, including the Margian (now Merv) Oasis and possibly Aria (Herat Oasis). To the west of Tedzhen stretched the territory of Hyrcania and Parthia. Hyrcania, at the time of the first Achemenids, was not only a large shore region in the southeastern corner of the Caspian, but something considerably larger. Hyrcania at this time included the foothill stretch of Kopet-Dagh (cf. Strabo, XI, 8, 2-3), bordered from the south by the so-called mountains, and from the north by the Kara-Kum desert. In this way, the region of the eastern part of Hyrcania was the present Atek Oasis; later, during the Arsacidae, it was the Parthian province of Apavarktika.

At the same time, with the indicated territorial limits of Hyrcania, the Parthians possibly occupied the more southern part of Khurasan and basically the valley of the river Kashaf-Rud, which is a tributary of the Tedzhen. The Thamaneans, mentioned by Herodotus in his story of the river Aces, could have been localized to the southeast of the present Herat Oasis, where lay the gorge-like valley of the river Tagad-Ishlan, the latter falling into the Gerirud east of Herat. This mountainous region still bears the name Taiman, which is obviously connected with the ancient ethnonemic name. It is essential to recognize, that of all the possible interpretations concerning the river Aces, taken from Herodotus, the most plausible one is the version just given, which identifies the Aces with the Tedzhen-Gerirud. It is doubtful that some other river could supply water for all the peoples named in Herodotus. However, Tedzhen-Gerirud could in fact have been used in the confines of the present Afghanistan by the local inhabitants, among which are included the Sarangeans and Thamaneans—where, as in its lower course, the river could nourish the irrigated network of the Parthians, Hyrcanians, and Khwarazmians—if we admit that the sway of the latter embraced the southern regions referred to above.

Written sources do not contain data by which one could, in full measure,

clarify how the Persian Conquest was reflected in the development of irrigated agriculture in Middle Asia. The question remains, how significant were the achievements in the development of artificial irrigation in the pre-Achemenid period?

Persia was a country where the irrigation type of agriculture dates back to antiquity. Polybius (X, 28, 3) reports the existence in Persia at the time of the Achemenids of a network of underground canals for collecting water drawn from such places, so that the inhabitants themselves did not know exactly the source of each canal. This means of irrigating the earth by the method of *kariz,* that is, a means of catching subsoil water, is characteristic of poorly-watered regions without important rivers. The information of Polybius is important because it confirms the existence in Persia of large irrigation constructions during the period of the domination of the Achemenids, which in its turn, shows the presence among the Persians of a long experience of irrigation agriculture. The Achemenids had in their possession the necessary technical power essential for the organization of various and sufficiently complicated hydro-technical works.

We may assume, in this connection, that the narrative of Herodotus about the river Aces and of the intervention of the Persian king in the use of its water resources for irrigation, gives the right to presuppose, in the Achemenid period, an important stage in the development of irrigational husbandry on the territory of the main agricultural oases of Middle Asia.

Recent archaeological excavations in the Kyzyl-Kum desert, adjacent to Bukhara Oasis, revealed that the wide territories situated to the east of this oasis, were in antiquity a continuation of the cultivated lands. However, at the present time this is a lifeless desert covered with sand in which lie only ruins of numerous ancient settlements, including Varakhsh, capital of the pre-Muslim rulers of Bukhara Oasis, and traces of irrigation canals. Some of these settlements flourished a few centuries BC, since they could only have developed with irrigation of the lands adjacent to the settled points. From that may be determined the time of the construction of a network of ancient canals of the later deserted cultural area of the western half of Bukhara Oasis.

V. A. Shishkin formed the opinion that the construction of the end part of Gau-Khitfar (and one must suppose, some other large canals of Bukhara and other regions of Middle Asia) belong to the period preceding the campaign of Alexander.

Investigation of the ancient Sogdian settlement of Tali-Barzu near Samarkand led G. V. Grigorev to conclude that, during the Achemenid period, there was a dense population living in fortified tribal settlements. This people practised arti-

ficial irrigation. For the history of irrigation, it is important to record that at that time there existed a system of irrigation founded upon now vanished sources of water-supply. Around such settled oases were meadows, orchards, and vineyards.

Unfortunately, from the point of view of the history of irrigation, the mountainous regions along the river Zaravshan have not been investigated. However, to the east of Kyrk-Bulak Pass, across the valley of the Zaravshan, there are traces of large dams, with an ancient cemetery nearby. Traces of dams, as yet undated, appear beside the Iskander-Darya, Shink-Darya, Dzhilaneh, and on other mountain streams of the Samarkand region.

Tolstov and his staff discovered surface traces of ancient irrigation on the right bank of Khwarazm, the exploitation of which could only have existed with large irrigation canals, attributable to the middle of the first millennium BC. Preserved remains of a settlement of this period were not found, but, according to Tolstov, this latter circumstance can be explained by the supposition that the earlier monuments were destroyed by succeeding generations. On the other hand, monuments of this period were discovered on the left bank of Khwarazm in the region of the ancient Chermen-Yab Canal (Kalaly-Tyr No. 1 and Kuzeli-Tyr *Gorodishches*). Tolstov considers that the main large canals of the right and left banks of Khwarazm were constructed during the second quarter of the first millennium BC.

WASHINGTON, D. C.

THE HYPOTHETICAL SITUATION: A TECHNIQUE OF FIELD RESEARCH

MELVILLE J. HERSKOVITS

THE PRESENT PAPER will describe a technique in ethnographic investigation that has been developed during research on the cultures of the Negro peoples of West Africa and various parts of the Caribbean area and South America. It consists, in essence, of devising, *ad hoc*, situations in the life of a people in terms of hypothetical persons, relationships, and events, which, being in accord with the prevalent patterns of the culture, are used to direct and give form to discussions with informants and other members of a group being studied. It will be of aid in considering the nature and utility of this technique to indicate something of its origin, development, and use.

The basic procedure was first employed in analyzing the proverbs of the Kru of Liberia. In 1927-8, a member of this group, resident in the United States, became available as an informant. The study was a linguistic one, but since proverbs seemed to offer good text materials, a collection of these was made. In working over the proverbs, however, it soon became apparent that the problem of meaning required a special kind of probing. At that time it was not recognized, as it is today, that the texts and translations of proverbs, without explanations, are of little utility; that only when the nuances of value-statements concealed in proverbs are analyzed, does their real meaning and the significant insight this gives into the implicit assumptions underlying much of the institutional and behavioral aspects of the cultures where they are employed, become apparent. Working with an informant far from his country, it was necessary, if the proverbs were to be made understandable, to set up hypothetical situations which revealed this meaning by reference to concrete instances of the circumstances under which these aphorisms would be employed. Informant and collector were thus continually engaged, conversationally, in aiding each other to build a canoe, or setting magic against one another's field, or preparing for a journey, or killing an animal belonging to the other—in short, going over situations of everyday life in terms of the human relations and the sanctions that would actually give rise to the use of a proverb and make it meaningful. The worth of this method, as evidenced in the manner in which these proverbs, in the published collection,[1] are embedded

1 M. J. Herskovits, *Kru Proverbs* (Journal of American Folklore, vol. 43 [1930], pp. 225-293, 1931).

in a matrix of explanatory data, has been confirmed by its use in a number of studies of proverbs that have since appeared.

The value of this technique of discussing persons and events in terms of hypothetical situations again became apparent during field-work among the Bush Negroes of Dutch Guiana. Because of historical reasons that have been detailed elsewhere in a work where the methods of field research employed in studying this culture have been described,[2] the use of informants in the conventional sense was not possible. Information could be obtained in two ways only—by chance observation of actual happenings, and by discussing specific events as they entered into conversations with individual Bush Negroes. In these conversations, however, it was possible to move from an actual happening to a hypothetical one, especially regarding the reactions of the people to situations where supernatural power was believed to come into play. Birth-customs offer a good example of how this worked. These include provisions to cope with an entire category of events, which may be subsumed under the heading of abnormal births. Women are most reluctant, not only to discuss such births, but even to mention actual cases of them. For in the beliefs of this people, the mishaps that can and too often do mark the birth of children, especially where actual or sociologically defined abnormalities are concerned, are ascribed to powerful beings, who will visit the same ill fate on those who talk too freely about what they have done. However, much of the reluctance to discuss child-birth, especially in its abnormal aspects, disappeared when hypothetical situations were presented, and it was literally only by the use of this method of indirection that data bearing on what proved to be an important aspect of the beliefs and practices of this people could be obtained.

In Africa, though the method was found useful where there was reluctance to discuss actual events touching on the numerous fields where the supernatural enters, it also proved its worth in investigating problems lying in secular phases of the culture. Here, unlike among the Bush Negroes, it is possible to employ the more customary informant technique to establish a core of data to be checked by observation and informal conversation. Even with informant-interpreters who were sympathetic and willing aides, however, it soon became apparent, for instance, that to obtain data concerning the family and its extensions, especially the sanctions under which these groups function in the daily life of the people, presented many unsuspected difficulties. Not only is there a strongly patterned reluctance to reveal too much about one's own group, but concomitantly there is actual

2 M. J. and F. S. Herskovits, *Rebel Destiny: Among the Bush Negroes of Dutch Guiana* (New York, 1934).

ignorance of the families of others about which a person might be willing to talk if he had the requisite information. Essentially, not only does convention tend to inhibit the discussion of such matters, but where sib myths are concerned, or where information is sought regarding the functioning of the characters in these myths in the everyday round, the fear of penalties exacted by these supernatural beings, on those who tell of them to unauthorized persons, imposes a very real barrier to effective probing.

The attempt was made to circumvent these sanctions by removing the discussion from the realm of reality, thus shifting it onto a plane where sanctions could not be operative, since there were none to apply. It was suggested to an informant that it might be interesting if the origin and growth of a relationship group were to be traced over the generations, beginning with a man who was merely named "A," and who, it was assumed, left his own family, migrated in the early days to another part of Dahomey, married, and founded a new line. This individual was then held to have had two sons, called "B" and "C." These, the assumption went, married and, when the founder of the group died, came in their turn to head the relationship unit.

As the discussion developed of the manner in which position was assumed and controls exercised, the entire pattern of the organization and structure of the Dahomean immediate family, extended family, and sib was revealed. Not only did the dynamics of the formation of the relationship groupings become apparent, but such matters as the inner functioning of these entities, the changing roles of their members with increase in age, and the differentials in the position and duties of men and women were made clear. It would be interesting to follow through and describe the data which this procedure brought to light, but since these have also been published,[3] they likewise need not be repeated. Suffice it to say that, after the line begun by "A" had been brought to the place where it had attained the position of a sub-sib, a situation had been reached where, the basic outlines of Dahomean social organization being in hand, further discussion could be in the nature of directed interviews—still in hypothetical terms, however—calculated to obtain detail and clarify points arising from the range of sanctioned forms, wherein differences which might involve contradictions or discrepancies were revealed. More than this, the materials proved to be of great utility in adding understanding to the observation of overt behavior. Without these basic data, indeed, the implicit values that underlie the forms of the sib system or the various kinds of marriage or even of the ancestral cult itself could have been gathered far

3 M. J. Herskovits, *Dahomey, an Ancient West African Kingdom* (2 vols., New York), vol. 1, pp. 139-144 ff.

less adequately, if at all; and, in any event, only with the expenditure of much more time and effort than when operating in terms of the background of knowledge that had thus been obtained.

In subsequent field-trips, the method of the hypothetical situation was employed repeatedly. Sometimes it entered as routine field method. But it always remained as an available instrument for the probing of those cultural elements of which the members of the society being studied were reluctant to speak. Thus in New World Negro societies, where African or African-like religious practices were banned by governments or operated under the disapproval of the legally sanctioned European Church, it functioned most effectively. In Haiti, many discussions of the *vodun* cult were begun, at least, by introducing hypothetical situations as if they were merely in the realm of possible happenings. A variant of the method was also found useful in Haiti, where local districts, bounded by ranges of hills, are distinctly set off from each other in the thinking of the inhabitants. In such cases, the community in another district could frequently be used as the locale of hypothetical incidents whose actual counterparts, the principals in which lived in the neighboring valley, would be named.

The subject of magic, which concerns protection against forces of evil or which brings them into play against others, is a topic that must be approached with particular delicacy. In all cultures, these things are regarded as anti-social, and thus something furtive, and to be concealed—covert, that is, in the accepted dictionary sense of the word. This is particularly the case in Haiti, where all forms of magic are outlawed by the legal code. Certainly attempts to discuss its nature and functioning, in specific terms, in a country village, would meet with the greatest resistance. It is, of course, possible to talk about it in terms of abstractions and thus obtain native theories as to the nature of magic and its setting in the total system of *vodun* belief. Yet we recognize that materials lying on this plane make it difficult for the student to obtain a sense of the variability we know exists in the actual functioning of any cultural phenomenon whose theoretical form and implications he obtains in what may be termed its stylized version.

The method of the hypothetical situation provided an admirable solution for this difficulty. It had become apparent that in African and African-derived belief, good and evil are but the obverse and reverse sides of the same shield. Just as there is no dichotomy between good and evil as such, so, in the functioning of magic, a charm or spell that can aid one man or woman can harm another, or even bring evil to the same person if the setting in which the magic is to be employed is changed. In accordance with this general principle, it follows that those who work with the supernatural must know and be able to control magic; that

one who works with magic in any form must be conversant with its evil as well as its benevolent manifestations. For, the argument runs, how can the specialist be expected to protect his client against evil if he does not know it well enough to track it down and set more powerful beneficent forces at work to negate its effects? Obviously, in such an atmosphere of belief, to discuss specific cases is impossible. By the use of hypothetical situations and personalities it was possible, however, to induce a worker of magic to make a charm of great potency as a demonstration—a demonstration so realistic that at the end of the session there was some difficulty in convincing him that the hypothetical situation was not merely a mask to conceal actual intent, and that it was not really desired that the charm that had been made should not be empowered. The esoteric details that were made available by the use of this method may be seen if the published account of the manufacture of this charm is consulted.[4]

With increasing use, it became ever more evident that the method of the hypothetical situation was by no means restricted in its effectiveness to those matters regarded as esoteric by the people being studied, or in analyzing complex structures of exoteric aspects of a culture. It was found to be equally valuable in bringing to light those elements of culture not mentioned because they are taken for granted. Students inevitably tend to overlook such points, which as often as not lie in the field of implicit sanctions and are thus not revealed by the observation of behavior or generalized discussion. The technique, that is, applies tellingly in those situations that were first given explicit recognition by one of the most astute field-workers American anthropology has produced, Elsie Clews Parsons, when she wrote: "In a conservative, secretive community the social detective learns much from efforts to conceal. . . . I was to learn that in social as in personal life the idea that there is nothing to conceal may result in almost complete concealment."[5]

Thus, in Trinidad and again in Brazil, the use of the method brought naturally to minds of informants and others points that they would have simply overlooked if describing a given institution in general terms rather than in the specific frame of reference this method entails. In Trinidad, for example, it was used in obtaining accounts, among other things, of the place of fishing in the life of the community—its economic role, the techniques employed in it, the modes of training fishermen, and the like. Again, it was used in studying child-care

4 M. J. Herskovits, *Life in a Haitian Valley* (New York, 1937), pp. 230-237; cf. Chapter 12 for the broader setting.

5 E. C. Parsons, *Mitla, Town of the Souls* (Chicago, 1936), pp. 14-15.

and child-rearing, and in reaching and understanding the basic meaning of the two types of marriage, particularly the system of extra-legal mating which, as in all New World Negro communities, was a puzzling element in the social organization of this group.

In Brazil, it yielded data of a type not ordinarily obtainable, not alone because of the esoteric elements involved, but also because the details of procedure entering into the situation were so numerous that in attempting to give an overall account in pattern-like terms the informant would inevitably miss many items. This concerned the economics of the situation wherein an established cult-center is reëstablished in a new locality—something that brings religious precepts and monetary considerations together in a focus where their common role is not easy to dissect and understand. It was learned that a woman, with whom good rapport had been established, was in the process of forming a new cult-center. Though it would have been a violation of accepted canons of etiquette to have questioned her about a project of this sort, it was not difficult, in discussing cult-procedure of various kinds, to lead the analysis to a point where a hypothetical cult-house was to be founded. Soon, however, the discussion moved from this hypothetical situation, first to the project in which she was actually engaged, and then, again hypothetically, to reëstablishing an older center. Here, once more, she moved to the exposition of an actual case. In both instances she cited facts that were so inclusive as even to yield budgetary figures, and in their totality to demonstrate the foresight with which developments of this sort are planned, providing a sense of how carefully financial provisions are made, as well as of the intricacy of the ritual procedures involved.

The most recent consistent use made of this method has been in connection with research carried on among the Black Caribs of the Republic of Honduras.[6] Here the pressure from the Spanish-speaking majority in the population causes the Negroes to be cautious about revealing many distinctive aspects of their system of belief, while factors of prestige which come into play make them reluctant to speak of those elements of their personal and social life which are at variance with the customs of the majority groups in the Honduran population. Observation and direct questioning seemed to have yielded everything that might be obtained, when recourse was had to the method of the hypothetical situation—in this case, in terms of a hypothetical family.

This family, as a whole, was given a name and, as it grew—for at the end it comprised a considerable number of consanguine and affinal members—each

6 By Mr Ruy Coelho. Information concerning the use of this technique among the Black Caribs was obtained through personal communication with him.

individual who entered into the discussion was also named. Once the "family" was established, the informant with whom it was initiated entered into the spirit of the discussion with far greater freedom than had been the case previously. Not only did it prove possible to obtain information concerning matters that direct questioning or suggestions of actual cases had been responded to by evasive or negative answers, but often unsuspected ramifications of a given situation were introduced into the discussion by the informant, or situations which had neither been encountered nor hinted at in previous conversations were called to mind and introduced into the overall picture. Moreover, word about this hypothetical family spread to friends of the informant with whom it was used, and they, too, entering into the spirit of the thing, would indicate still other situations in which it and its members might function. As in the instance of the Brazilian cult-member, telling of the fortunes of a hypothetical cult-house, the discussion in Honduras would frequently slip from hypothetical to actual occurrences, as confirmation of a supposed happening was given by reference to an actual event in village life in which a particular person, indicated by name, had been involved.

The method discussed here brings to mind its nearest counterpart among those techniques of field-work that have been given formal expression—the genealogical method announced four decades ago by Rivers.[7] In a manner not unlike the method of the hypothetical situation, the genealogical method was worked out in an attempt "to investigate abstract problems on a concrete basis"—that is, to obtain documentation which would assess the relation of the ideal, generalized patterns of accepted behavior in a society to the range of variation in actual behavior by a process of induction whereby the patterns flow from specific instances. Like the genealogical method, that of the hypothetical situation is a tool with which to explore relationships between members of a given society and the sanctions which cause these relationships to have meaning in the life of a people.

It is apparent that these two techniques are in no way opposed; indeed, they can, and have been combined, as in the instance given of the use of the hypothetical situation in Dahomey and among the Black Caribs. It is a simple matter, in working out a specific relationship system, to make of *Ego*, the point of reference in such work, an hypothetical individual rather than the informant himself. In many situations this may not only be profitable but essential; indeed, one wonders why such a useful way out of difficulties that Rivers himself enunciated did not occur to him. For, it will be recalled, he speaks of how, among some groups,

7 W. H. R. Rivers, *The Genealogical Method of Anthropological Inquiry* (Sociological Review, vol. 3, pp. 1-12, 1910).

"The existence of a taboo on the names of the dead . . . can sometimes only be overcome with difficulty." The question arises whether the recourse to secrecy he suggests as the essential way out of a difficulty of this sort might not effectively be replaced by the use of the method discussed here. This would be equally true where political tensions or religious prohibitions might operate to induce resistance to probing actual relationships, for in such cases the genealogical method would inevitably encourage evasion and invite falsification, and thus at best make the problem of verification more difficult and time-consuming where it did not lead to erroneous conclusions.

To indicate the contribution which the indirections called into play by the method of the hypothetical situation can make to efficiency and reliability in field research does not, of course, imply that it can solve all the problems or should be regarded as a substitute for those other techniques that over the years have proved their utility. It is quite conceivable that in cultures where no pattern exists to encourage a play of the imagination along the lines it calls for, the method could be used with difficulty, if at all. Again, where reticence in the face of questions posed by the ethnographer does not appear, as in certain South Sea islands, to use it would be merely to introduce an unnecessary extra step in research procedure. In such cases, it would at best be a means of objectifying and making specific the telling of rare occurrences, or those of a censured or pathological nature, or of revealing characteristic reactions and attitudes so taken for granted that they would not ordinarily be verbalized.

In essence, the method of the hypothetical situation is a novelistic technique, the utility of which arises out of its character as a kind of projective device. It has long been recognized by students of literature that the creative process feeds on experience. Even the most fantastic tale bases its fantasy on reality; even when writing most objectively about his characters, an author reveals his own beliefs, his own drives, making of his tale a reflection of his own background and of his own personality. It is a commonplace in the teaching of elementary composition that the student be continuously cautioned to write of what he knows, not of times, places, and persons far removed from his experience. In terms of ethnographic science, this principle is one on which we constantly rely in doing field work, for we assume that no human being has the creative resources that will permit him to fantasy a culture, or even a part of a culture. It is for this reason that we feel that working with a single informant, perhaps in our museums or universities, far removed from the life of his society, is in the study of many problems methodologically justifiable. No one can make up a social system, a grammar, a theology; at most, he but registers the flow of his imagination over

his enculturative experience, in introducing the deviations from the common custom of his group we sometimes find, later in checking in the field, that his account contains.

It is on the functioning of just this creative, projective mechanism that the method of the hypothetical situation draws. Wherever the play of the imagination can be called upon, this technique makes use of the insights this affords, plus the solid body of fact that must come forth because the informant is basing his discussions on specific situations, happening to specific persons, the whole set in the matrix of specific cultural orientations. With great frequency, as might be expected, the hypothetical person turns out to be the informant himself, who is freed by the fictional quality of the approach to reveal facets of his personality he would take all pains to conceal were he speaking about himself. In similar fashion, he is released to tell of happenings to himself or to others that, in any terms, he would be loath to reveal were he naming "actual" persons. Thus both in the personal and the cultural sense, he can go further, and will go further in expressing reactions than conventions of approved conduct would otherwise permit.[8]

We all use this method informally when we "suppose" happenings of various sorts to have occurred when talking with persons from whom we seek information. What the method of the hypothetical situation does is to give to these happenings a structured form that permits us to direct discussion toward the solution of a particular problem in a given research project. And since, as we have seen, it brings forth responses that are in the nature of projections of the informant's experience against the background of his culture, it affords the investigator a heightened sensitivity to those relations of person to person, in the group being studied, that reaches to the deepest levels of the equation of the mutual influences exerted by the individual on his culture, and by culture on the individual who lives in terms of it.

NORTHWESTERN UNIVERSITY
EVANSTON, ILLINOIS

8 I am indebted to F. Kluckhohn for the suggestion that, insofar as the projective aspect of the method of the hypothetical situation is concerned, care should be taken to distinguish two different kinds of reactions likely to be called forth by its use. The first of these is attitudinal, and would arise from its utilization in probing those experiences of the individual and aspects of culture having a heavy loading of affect. This would yield results different from those obtained when the method was used to collect descriptive ethnographic data where no particular ego-involvement might be expected.

CULTURE, SOCIETY, AND THE INDIVIDUAL

WILSON D. WALLIS

THERE HAS BEEN much discussion recently regarding the reality, or ultimate, irreducible reality, of culture, of society, and of the individual. This concern was to the fore a quarter of a century ago, became quiescent, and now again is stirring, not to say agitating, the waters.[1] Is there a common ground on which disputants could find agreement?

If there is, as some infer, one world of phenomena, logic, and scientific method, there should be a common ground for all searchers of man's or nature's secrets. Even if there is no such common world for all men and all science, it could be that there is a common meeting-place for those who deal with man and his accomplishments, as these are included commonly in the designation culture, society, and the individual. The present article is an endeavor to indicate that there is a common ground of understanding and, in fact, a common agreement underlying the verbal contradictions between the seemingly incompatible views of respective champions of culture, society, or the individual.

Our argument will be: (1) There is no absolute independence of any field of phenomena, inanimate, animate, or mental; and, therefore, no absolute independence of any segment of one of these fields. This does not imply the same kind or degree of dependence of one on each or on any other two phases. (2) The degree of relative independence of field or phase is a function of what is taken for granted in the treatment of phenomena. (3) This, in turn, depends largely on the objective of the study in question, or, let us say, on the interests and goals of the student of the phenomena.—We shall illustrate applications of these logical principles; but the pertinence of the illustrations, of course, implies the validity of these propositions. If they are not correct, the argument falls. This, however, is not the place to justify them in detail.

Culture, society, and the individual are intimately interdependent. No culture: no society and no individual—at least none of the kind with which we are acquainted. Change one, the others change; if not in formal aspect, certainly in full or detailed meaning. Each of them is dependent on many other things—in fact, on about everything that has happened during cosmic evolution. If that event had not happened. . . .

1 See, for example, A. L. Kroeber, *Anthropology* (New York, 1948); *idem, The Concept of Culture in Science* (Journal of General Education, vol. 3, pp. 182-196, 1949), and Leslie A. White, *The Science of Culture* (New York, 1949).

We look across the street and see a man standing at the intersection.

An astronomer explains that if the sun had not experienced a near-miss from a passing star, there would have been no solar system, and no planet on which to stand. If the sun did not radiate heat and light, there would be no life.

This man is an illustration of cosmic force.

A physicist remarks that if the laws of physics had not prevailed, a planet sent whirling would not have kept on whirling; in that event only one side of it would receive heat; meanwhile the other side of the world would be frozen. A chemist reminds us that even breathing involves chemical reactions. Without them, no one can stand or move. Therefore, this man is obviously a chemical phenomenon. A biologist reminds us that he is a biological phenomenon.

The sociologist and a student of culture remind us that without culture there would be no street in which to stand. A psychologist remarks that if the fellow was not responding to certain stimuli, and had not developed a habit of so responding to them, he could not be here. Each stated an incontestible truth. Each answered, correctly, an inquiry in which, supposedly, he was interested.

An answer satisfactory to one is, however, not an answer to the inquiry of any other. Each has a different answer because he asks a different question; and the answers of the others are irrelevant to his inquiry.

If I put on the printed page the statement "The world is round," several things which are true can be said of the statement. I have used four words. But that fact is irrelevant to the meaning of the words. The printer has used black ink and the English language. These truths, also, are irrelevant to the meaning of the words. I show my culture heritage. This is equally irrelevant to the truth, or falsity, of the statement. But no one of the above statements about the four words is irrelevant to the truth which it states.

With regard to anything else, an engine, a culture, a society, an individual, a comparable observation will apply. If I take for granted other relevant things, the behavior of a person I can explain as a cultural phenomenon, a social phenomenon, or a psychological phenomenon. I can explain Dakota culture, or any part of it, in terms of culture, or in terms of psychology. If I explain it in terms of culture, I take for granted the other relevant factors.

If I explain it in terms of psychology, I take for granted the culture background and the social inheritance. Whatever the stimuli may be, that is, the data, the utilization, and equally, the rejection, of them, imply reaction to them. A psychologist takes for granted the physical world; he can take for granted the cultural and social world. In fact, that is what he usually does. There are different reactions in different culture worlds because different culture traits are the stimuli.

This fact does not explain why the linguistic stimuli in one locality are Eskimo and in another locality are Sioux. Do we have a cultural, that is to say, historical, explanation of that fact, or merely a formula to cover our ignorance of the data necessary to explain it?—namely, culture is bred of culture, the present grows out of the past.

Can not the psychologist say as meaningfully that individual reactions are not identical, they modify linguistic stimuli, and these modifications in turn become stimuli to successive generations, with the result that language is greatly modified?

Is not such modification exactly what takes place? As students of culture we can, of course, be blind and deaf to individual variations and record merely drift. Is not that equivalent to a declaration that we are interested in culture rather than in individual reactions? Are we not doing in our field what the psychologist is doing in his when he says that he is interested in reactions to stimuli and not in stimuli as such?

His questions are not ours, and the answers which satisfy him do not satisfy us if we are primarily students of culture; conversely, our questions are not his, and our answers do not give him the answers to his inquiries. When either takes the data of the other for granted, each obtains answers which to him are relevant.

If these interdependences exist, then we can easily fall into error when we treat any one field or group of phenomena as though they were entirely independent of other phenomena or fields. For example: Culture proceeds according to its own laws. Out of nothing, nothing comes. And out of something, only certain kinds of things come. Certain inventions, we are told, were inevitable.

They may be said to be inevitable, or very probable, if they are potentially inherent in the culture; as, let us say, a cure or a prevention of cancer. To assume, as some do, that this does not imply interest and special abilities of individuals as individuals seem to be leaving Hamlet out of the play. If we are interested only in the patterning of the play, Hamlet can be left out, or a proxy substituted. But it is then not quite the same play. Similarly, if Newton is left out, it is not quite the same culture pattern. Indeed, Newton, it seems, is as relevant and as significant as are many other parts of the pattern. One can leave out Newton if one is not interested in individuals or in modifications of culture pattern consequent on their activities; as one can leave out technology if one is not interested in it or in its repercussions on the culture.

When we pass from the assertion that culture changes of a specified kind are inevitable to the assertion that, therefore, culture is superindividual and can not be controlled by man, may it not be that we are centering attention too narrowly on the cart and assuming that it must be pushing the horse ahead? It may seem

that it requires all the effort of the poor beast to keep out of the way of the cart. But if the cart should disintegrate, it is conceivable that the horse could go on—to arrive nowhere with no reward for past efforts. If, however, the horse should disintegrate, the cart could not go on. Although both have inertia, barring atomic disintegration, the dynamic, except for a down-hill trip, is in the horse. Although man is harnessed to culture, the dynamic, it seems, is in the organic portion of the team.

What man does to culture appears to be as important and as compulsive as what culture does to man.

If man does not want to change his culture, then, barring outside compulsions, it will not be changed. But is there never a wish that is father to the thought? The individual who becomes a creature of habit has created these habits, and now they control him. Some of them, we say, he can not break; some, to a degree, or absolutely, he can and does break. Perhaps the underlying thought of some exponents of culture determinism is that you can not make man want to do what he does not want to do. Granted that this is so, it may be that at certain times man wants to do what at other times he did not want to do. If you treat culture as a closed system, the only possible explanation of response to culture is that culture compels it.

Do the facts suggest that culture is a closed system? There seems not to be such in any other phase of nature or of human history. What precisely is meant by the statement that there is no free will? If it means that the will can accomplish anything, assuredly there is no free will. If the statement means that what goes on within the individual does not influence his behavior, one suspects that relevant facts will disprove it. If we do not conform with the laws of physics and chemistry, we can do nothing; but one can defy all the physicists and chemists in the world to predict whether I will turn right or left when I arrive at a certain corner; whereas those who know where I live can make a very good prognostication. If, however, I have trodden on a tack and decide that I should visit the shoemaker, that fact may influence my conduct and I may return to my domicile by a route more devious than usual. The tack does not deserve credit for this modification of my conduct; and I do not know what thing or idea outside my epidermis will wholly account for it.

Not all persons who share a culture react to it in the same fashion or to the same degree.

This variance of reaction to the culture can be described as a phase of the culture; and it can be described, with certainly as much faithfulness to the facts, as a difference in individual reactions.

If you are interested in individual behavior, and in differences in individual behavior patterns, these individual differences will be matters to investigate; if you are interested merely in culture, they will be only so many illustrations of variability in culture expression. As a matter of historical fact, the student of primitive cultures has generally been interested primarily in the pattern of culture which prevails in a tribe or region, rather than, primarily, in the fluctuations in the pattern or in the quantitative extent to which a trait is present. For example, he will record the type of sled made in an Eskimo community and, usually, not inquire what percentage of persons make the sled, of what precise age status they are, or what topics they discuss, if any, while they make this device. The student of psychology might be interested in precisely those things which the student of culture neglects.

Moreover, the student of psychology can describe in psychological terms the entire process of making sleds and using them. His findings would not add much to our knowledge of the technology of the culture; but it would add to a knowledge of the operation of an Eskimo psyche with respect to making and using sleds. He does not answer our questions; neither do we answer his.

To summarize the above argument and illustrations: In the investigation of any phenomena we are likely to come out the same door by which we enter.

Usually there are many different ways of viewing the same phenomena.

What questions, and techniques in answering them, will be fruitful depends on the nature of the inquiry. If we are concerned with quantitative aspects, only quantitative procedure will supply an answer. If we are looking for qualitative differences, we must set up qualitative criteria. A microscope will not help much in studying the Milky Way; and a telescope will not help much if we look through the wrong end of it. If we study individuals as though they were moving about in a vacuum, it will take a long time to discover social facts and cultural data.

Similarly, if we limit attention to cultural achievements, the individual will, of necessity, fade into insignificance, or perhaps confuse our vision.

But as physics—if I understand a portion of Mr Einstein's account of it—is now concerned mainly with fields rather than, as formerly, with presumed isolated bodies, so, it appears, a study of any segment of human history or any aspect of it may be profitably concerned with fields of influence which pour in from what our categories suggest are separate things, for example, culture, society, individual. No one field, considered in isolation from either of the others, not to mention a variety of additional fields or influences, is entirely the master of itself or its destiny. If culture makes individuals, it seems to be equally true that indi-

viduals make cultures. That you can treat phenomena in one realm without treating phenomena in any other realm, and make useful sense of those in the chosen field, seems equally clear. There need be no quarrel with any specialization which clarifies its data. This charity might be extended to all endeavors which enlighten. We need only remember that, for example, although nothing can be done without the operation of physical forces, they do not explain things which are not physical; for example, why one should utilize them, or utilize them as he does.

The Sun Dance of the North American Plains area is a culture phenomenon. But the culture approach does not tell us how it originated; and if it did so enlighten us, this story could be told in psychological terms as accurately as in culture terms.

A point of view which includes both culture and psychology is more satisfying and more significant than either one of them, or than both of them treated as independent approaches.

University of Minnesota
Minneapolis, Minnesota

STUDIES IN AFRICAN LINGUISTIC CLASSIFICATION: IV. HAMITO-SEMITIC

JOSEPH H. GREENBERG

THE UNCERTAINTY regarding the possible extension of the Hamito-Semitic languages in Negro Africa is well described by Marcel Cohen in his recent *Essai Comparatif sur le Vocabulaire et la Phonetique du Chamito-Semitique* when he states that

> the question is . . . complex and irritating. What must be determined is whether certain of these languages, or even the majority of them should not be considered to be members of the Hamito-Semitic family whose definition should be revised in consequence.[1]

Highly conflicting opinions are current regarding the existence of Hamito-Semitic languages in Negro Africa. On the one hand, one finds to varying extents in standard ethnologic works, the vast extension of Hamitic espoused by Carl Meinhof, while other writings, notably those of M Delafosse and, in more extreme form, those of Mlle Homburger, the unity of Negro-African languages is proclaimed and it is denied that any belong to the Hamito-Semitic family.[2]

In the present essay I shall review the evidence concerning the various languages of Negro Africa that have been regarded by some writers as belonging to the Hamito-Semitic family. If the theoretical statements made in the introductory section of this series of articles on African linguistic classification is kept in mind, it will be realized that our point of departure must be the existence of four languages or language groups—Semitic, Berber, the extinct ancient Egyptian, and the Cushitic languages of East Africa—which exhibit such marked morphological and lexical resemblances that their relationship cannot be doubted, and has, in fact, gained general acceptance. The problem will then be to determine whether any of the suggested languages possess those *specific* morphological and vocabulary elements which characterize the generally accepted Hamito-Semitic languages. Thus, it will not be sufficient, after the manner of Meinhof, to operate with such general concepts as *Ablaut*, polarity, and grammatical gender. I have little doubt that, on this basis, if a Negroid population had been found in Central

---

1 Paris, 1924, p. 24.

2 For the view of M. Delafosse see *Les Langues du Soudan et de la Guinée* (in *Les Langues du Monde*, A. Meillet and M. Cohen, eds., pp. 463-560, Paris, 1924); for those of Mlle Homburger, *The Negro-African Languages* (London, 1949).

Africa speaking an Indo-European language, Meinhof would, without further ado, have classified it as Hamitic. If we take as an example Meinhof's chief criterion, grammatical gender, we see that its mere presence in two languages proves very little. To say, however, that these two languages possess a feminine formative *t* increases greatly the specificity, and with it, the cogency of the evidence. If this point of view is adhered to, it is found that in all cases a clear answer is possible. Specific points of resemblance are either so numerous that genetic relationship must be accepted or so rare that it must be decisively rejected.

The proposed languages and language groups whose possible membership in the Hamito-Semitic family is to be evaluated are (1) Fulani, (2) the "Nilo-Hamitic languages" (Masai, Nandi, Turkana, Suk, Bari, and others), (3) Hottentot, (4) Hausa and similar languages in the Lake Chad region.

Fulani has already been considered and rejected in an earlier essay in this series. There it was seen that concrete resemblances to the Hamito-Semitic languages were almost completely absent, while the evidence adduced pointed unmistakably to inclusion in the West Atlantic branch of the Niger-Congo family.

Turning to East Africa, the group of languages traditionally called Nilo-Hamitic are to be considered next. Here, as in the instance of Fulani, the typical Hamito-Semitic pronominal and verbal elements are entirely lacking. Sex gender is indeed present, but the formatives used—*l* masculine and *n* feminine—show no agreement with those employed in the Hamito-Semitic languages. There are some vocabulary resemblances, in greater number than for Fulani, but the fact that the resemblances are almost entirely with the neighboring Cushite languages and not with other branches of Hamito-Semitic shows that we have to do with borrowing.

The relationship of the Nilo-Hamitic languages lies obviously in another direction. There are thoroughgoing resemblances in fundamental vocabulary with the Nilotic languages—Shilluk, Dinka, Nuer, and others. Pronominal and verbal forms show close correspondence in the two groups. We find highly idiosyncratic plural formations shared by both groups of languages. The mere fact that the Nilo-Hamitic languages have grammatical gender while the Nilotic do not, is, as we have already seen, not in itself decisive. Moreover, Shilluk, a Nilotic language, has *ja-l* 'boy', *ja-n* 'girl' with the very same affixes for male and female quoted above as characteristic of the Nilo-Hamitic languages.

Indeed, the relationship between the Nilotic and the Nilo-Hamitic languages is so close that they must be considered as forming together a single subfamily of a wider group to which I apply the name Eastern Sudanic. The other sub-

families are Nuba, Beir-Didinga, Barea, Tabi, Merarit, and Dagu (or Dajo).[3] This linguistic stock will be subject matter of a subsequent essay in this series where full proof concerning the validity of this grouping will be presented. The view that the Nilo-Hamitic is a kind of linguistic hybrid of Nilotic and Hamitic components, consisting of Nilotic bases with Hamitic prefixes and suffixes will likewise be considered and rejected. An actual examination of the evidence will show that, in reality, there are very few resemblances of this order, no more than can be ascribed to chance convergence.

Meinhof revived the earlier suggestion of Lepsius that Hottentot was a Hamitic language. Here again the chief, and in this case, practically only, consideration was the presence of sex gender in Hottentot. Meinhof's view was that the clicks of Hottentot were borrowed from Bushman, along with a large portion of its vocabulary. Actually, the vast majority of Hottentot verbal and nominal roots begin with clicks and all would presumably have to be borrowed if Meinhof's explanation were to be retained. In addition, Hottentot and at least the North Bushman languages have the following fundamental features in common. The verbal and nominal bases are practically all disyllabic, or can be reconstructed as such, and exhibit a specialized pattern. They begin either with a click or non-click consonant, clicks occurring in this initial position only. This is followed by a very restricted group of vowels in second position. In the third position only a small selection of non-click consonants occur. In the fourth and final position, we find the full gamut of vowels. The sharing of this fundamental pattern in which the clicks function in a special role is powerful evidence for the relation of Bushman and Hottentot. If we add the vocabulary resemblances and the presence of similar verb tense afformatives, the evidence for this connection becomes overwhelming.

In fact, the click languages of the Bushman-Hottentot area clearly fall into three subgroups—northern, central, and southern—a division which cuts across the cultural distinction between hunting, food-gathering Bushmen and pastoral Hottentot. Hottentot belongs in the central linguistic group along with the languages of the Tati Masarwa and Naron Bushmen, the relationship to the latter being particularly close. This point has been seen by Schapera, who considers Hottentot rather to be a Hamitic-influenced Bushman language than Bushman-influenced form of Hamitic speech.[4] Likewise, D. Bleek, in her comparative vocabulary of

3 The inclusion of Merarit and Dagu, both spoken in areas of the Sudan remote from the Nilotic and Nilo-Hamitic languages, is surprising. Merarit has usually been classed with the neighboring Maba but this connection did not prove valid.

4 I. Schapera, *A Preliminary Consideration of the Relationship between the Hottentots and the Bushmen* (South African Journal of Science, vol. 23, pp. 833-866, 1926).

Bushman languages, quotes Hottentot forms along with those of the central Bushman group.[5] The only real point of resemblance with Hamitic-Semitic languages is in the presence of a *b* suffix for the masculine singulars and an *s* for the feminine singulars, a point shared with Naron Bushman. With the masculine *b* of Hottentot we may compare the *b* masculine of the objective case suffix of Bedanye, a Cushite language; the feminine *s* appears a possible development of the general Hamito-Semitic *t*. In the absence of other resemblances such a point of contact is arresting, but hardly decisive. If not an accidental convergence, there has been borrowing from a Hamitic-Semitic language and nothing more. In view of the considerable evidences pointing to relationship with the Bushman languages, the only other alternative is to consider Bushman and Hottentot together as a distinct subgroup in Hamito-Semitic. This has never been suggested by anyone and is entirely unlikely.

The remaining group of languages of Negro Africa sometimes regarded as Hamitic is that represented by Hausa in Meinhof's treatment. The resemblance of Hausa to the Hamito-Semitic languages was noted by earlier writers. Lepsius in 1863 put Hausa in the same Hamitic group as Berber.[6] Others, while not following him in admitting a special resemblance with Berber, have likewise considered Hausa to be Hamitic. In 1866, F. Müller edited and published Krause's material on the Musgu language, south of Lake Chad in the same general area as Hausa, and declared it also to be Hamitic.[7] Meinhof nowhere mentions other languages than Hausa in the text of his work, but from the accompanying map it would appear that he also considered Musgu to be Hamitic.[8] In several publications J. Lukas has pointed to an entire group of languages which he calls Chad-Hamitic and which includes Hausa and Musgu along with a number of other languages in this area.[9] M. Cohen, in his recent comparative essay on Hamito-Semitic, remarks on the obvious resemblances between Hausa and the recognized Hamito-Semitic languages, and cites occasional Hausa forms in his comparative vocabulary.

Unfortunately, up to now, Hausa forms have been cited in isolation and without much consideration of the other languages in the area to which Hausa is clearly related. This is easy to understand inasmuch as Hausa is a conspicuous

5 D. F. Bleek, *Comparative Vocabularies of the Bushman Languages* (Cambridge, 1929).

6 R. Lepsius, *Standard Alphabet* (2nd ed., London, 1863).

7 *Die Musuk-Sprache in Central-Afrika* (Vienna, 1866).

8 *Die Sprachen der Hamiten* (Hamburg, 1912).

9 *The Linguistic Situation in the Lake Chad Area of Central Africa* (Africa, vol. 9, pp. 332-349, 1936) and *Der hamitische Gehalt der Tschadohamitischen Sprachen* (Zeitschrift für Eingeborenen-Sprachen, vol. 28, pp. 286-299, 1938).

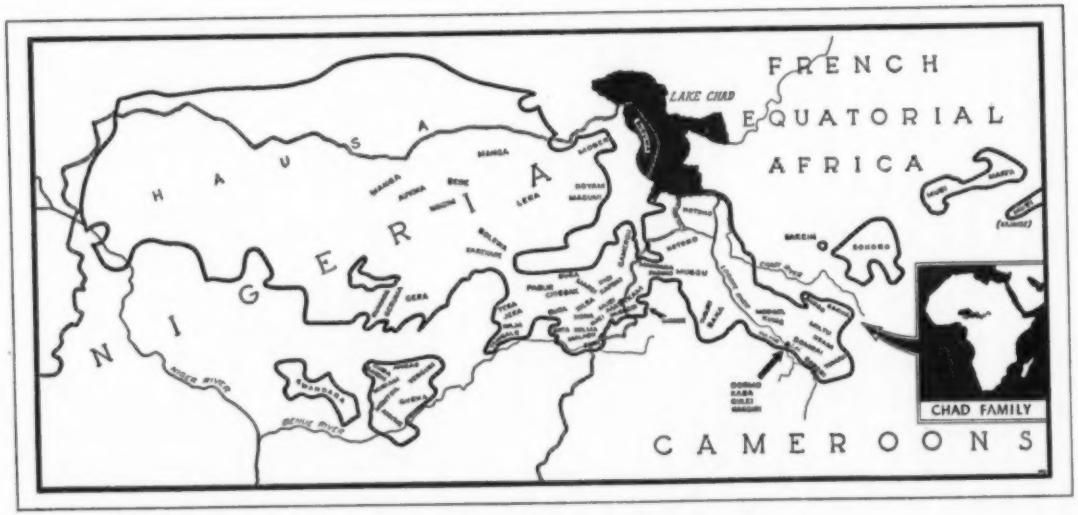


Fig. 1. Chad subfamily of Hamito-Semitic (Afroasiatic).

language, perhaps the most widely spoken in Negro Africa, and material on it is relatively abundant. The bringing in of other languages of the Lake Chad area greatly strengthens the case for the entire group of languages as forming a branch of Hamito-Semitic. Other languages in the area show pronominal and verbal forms similar to those of Hausa, thus showing that they are not recent borrowings from Arabic as has sometimes been suggested. Vocabulary resemblances are similarly strengthened and further etymologies become possible which could not be discovered on the basis of Hausa alone.

Before presenting the evidence for the inclusion of these languages in the Hamito-Semitic family, I shall outline and classify its membership. The Chad-Hamitic family is, in my opinion, more extensive than that outlined by Lukas in his various discussions. Here, once again, we meet the typological thinking which has produced such confusion in regard to linguistic relationships in Africa. Lukas excludes languages which do not have sex gender. Thus Mubi is considered to be Chad-Hamitic because it has a gender system, while the other closely related languages of the eastern subgroup (group 9 below) are rejected. It may also be pointed out that not all of the previously accepted Hamito-Semitic languages have grammatical gender. In particular, it is lacking in the languages of the western subgroup of Cushitic (Kaffa and similar languages).

The following classification of the Chad languages into nine groups is rather conservative and may be replaced eventually by a simpler one. Considering the limitations of the data available, the present procedure seems safest. The arrangement is approximately from west to east.

1. (a) Hausa; (b) Ngizim; (c) Bolewa, Ngamo, Karekare, Kanakuru, Angas, Ankwe, Sura, Montoil, Baron, Gurka, Yergum
2. Kotoko group (Mackeri, Ngala, Affade, Klesem, Gulfei, Shoe, Kuseri, Logone, Buduma-Kuri)
3. (a) Bata-Margi group: Bata, Bachama, Malabu, Njei, Zany, Holma, Kobochi, Vadi, Higi, Baza, Falli of Kiria, Kapsiki, Gudu, Vizik, Sukur, Mubi, Cheke, Margi, Chibbak, Bura, Pabir, Kilba, Paduko; (b) Gabin, Hona, Hinna, Tera, Jara
4. (a) Hina, Daba, Musugoi, Gauar; (b) Gisiga, Muturwa, Badda, Muffo, Muffu, Matakam
5. Gidder
6. Wandala (Mandara, Gamergu)
7. Musgu
8. Bana, Banana, Kulung, Lame

9. (a) Somrai, Tumak, Ndam, Miltu, Sarwa, Gulei; (b) Gaberi, Nangire, Dormo, Chire; (c) Sokoro (Bedanga); (d) Tuburi; (e) Modgel; (f) Mubi, Karbo

Unclassified: Bode, Waja, Tula, Tangale, Mober, Gwandara

The morphological resemblances of the Chad-Hamitic languages with the recognized Hamito-Semitic languages are so numerous that the following exposition is purposely confined to a few salient points and the quotations are drawn from a restricted number of languages.

1. The feminine formative *t* is found in the Chad languages. We have Bachama *-to,* Malabu *-ti,* Bana *-ta,* suffixed to feminine nouns. In Hausa, *r*<*t* is the definite article for feminine nouns and *ta'* is base for possessive pronouns referring to feminine nouns. Many further instances could be cited. With these uses, we may compare Egyptian *t* suffixes to feminine nouns, Semitic *-at* suffixed to feminine nouns, Berber *t* simultaneously prefixed and suffixed to feminine nouns and, in some Cushite languages, the *-ti* definite article added to feminine nouns and *t* as a base for feminine demonstrative adjectives.

2. The opposition *k* 'masculine' /*t* 'feminine' is most clearly found in Mubi where as possessive particles we have *gi*<*ki* after masculine nouns and *di*<*ti* after feminine nouns. This is parallel to the Somali suffixed definite article, e. g. *nin-ki* 'the man', *nag-ti* 'the woman' and to the k/t opposition employed in the demonstrative adjectives of Sidamo and other Cushite languages.

3. The employment of *n* as a connective between a noun and a following dependent genitive is found in Musgu *na,* Logone *n,* Margi *r*<*n,* etc. This usage in the Chad languages coincides with that of Egyptian *n* and Berber *n.*

4. In the formation of noun plurals, there is detailed resemblance, particularly to Berber and the Cushite languages. Taking our examples from Logone, we have the following:

a. Doubling of the final consonant with additions of *e: gam* 'hoe', *gamme* 'hoes'. Compare the Cushite Chamir *iel* 'eye', *ielle* 'eyes'.

b. Internal change of some other vowel to *a:* Logone *sini,* 'tooth', *san* 'teeth'. In Bedauye, or North Cushitic, we have *'or* 'son', *'ar* 'sons'; in Berber *a-jɒiɒ* 'bird', *i-jɒaɒ* 'birds'. (The initial vowels are a historically distinct formation.)

c. Suffixation of *en.* Logone *marar* 'breast', *mararen* 'breasts'; Berber *a-xam* 'tent', *i-xamen* 'tents'.

d. Suffixation of *en* plus internal change to *a.* Logone *ŋgun* 'belly', *ŋgwanen* 'bellies'; Berber *a-fus* 'hand', *i-fassen* 'hands'.

5. There is extensive over-all correspondence in the pronominal system, particularly in the personal possessive suffixes attached to nouns. Among the more significant points of agreement are the following:

a. The first person singular possessive added to a noun is usually *-u* (Logone, Sokoro), as in Berber, or *-i* (Mubi) as in the Semitic languages. It is a striking point of agreement with Semitic that except for the first person singular possessive the sets of pronouns suffixed to nouns to indicate possession and to verbs to indicate the pronominal object are identical. Thus Arabic (Semitic) has *'abu·-ka* 'thy (masc.) father' and *yaɒribu-ka* 'he strikes thee (masc.)' with the same suffix. In the first person however, we have Arabic possessive *ya·, i·* 'my' but *ni·* 'me' as the objective of a verb. The very same contrast is found in the Chad languages where *-ni* is common as the first person singular pronominal object of verb forms (Buduma *-ni*, Logone *-'ɔn*, Hausa *-ni*). Thus we have Hausa *'uba·n-a·* 'my father' but *ya· ba·-ni* 'he gave me'.

b. In the Chad languages, we have *-ka* 'thy (masc.)' and *-ki* 'thy (fem.)' or forms easily derivable therefrom (Hausa, Logone, Mubi, Bolewa, and many others). This agrees exactly with Semitic *-ka* and *-ki* in the same meanings and with Egyptian *-k* 'thy (masc.)' and *č* (<*ki*) 'thy (fem.)'.

c. The common masculine third person possessive *-ni* (Logone, Gabin, Bura, etc.) is to be compared with the Cushite Galla *ini* 'he'; Bilin, Quara, Demba, *ni* 'he'.

d. The second person plural possessive Hausa *-ku*, Jara *-kun*, Ngizim *-kum*, Ngamo *-kɔm*, etc., may be compared to Proto-Semitic **-kumu·* 'your (masc.)' /*-kinna·* 'your (fem.)'; Egyptian *-čn* <*kin* 'your' and Cushitic Bedauye *-kna* 'your'.

e. The Hausa third person singular subject pronouns in construction with a verb, *ya· zo·* 'he came', *ta· zo·* 'she came' correspond exactly to Semitic (Arabic *yaɒribu* 'he strikes', *taɒribu* 'she strikes'), Berber *idda* 'he goes', *tedda* 'she goes', and Cushite (Bedauye *idif* 'he goes', *tidif* 'she goes').

6. One remarkable detailed resemblance to Semitic deserves to be mentioned. In Semitic languages, verbs with initial *w* in the perfective have forms without *w* in other tenses and in the derived noun. In Arabic, for example, we have *walada* 'he begat', *lida* 'the act of begetting'; *wasina* 'he slept', *sina* 'the act of sleeping'. In Logone we have this same alternation in the verb 'to sleep' *wisan* 'he slept' but *san* 'the act of sleeping'. Borrowing is out of the question since *wasina* is not in use in present-day Arabic.

A number of resemblances between the Chad languages and the other

branches of Hamito-Semitic are cited at the end of this article. All of these etymologies are at least probable, many quite certain. I have rigorously rejected a number of comparisons, some of which may indeed turn out to be correct, because the forms are only attested from single languages, or a single subgroup of the Chad languages, and are therefore probably recent lexical innovations. Thus, at first glance we might be struck by the resemblance of the Cushite Chamir *zila* 'bird' to the Ngala Chad form *zila* 'bird'. However, both forms are isolated in their respective groups, so that we have here probably an instance of recent convergence. I have only used Chad forms in etymologies if they occur in at least two subgroups. Forty or fifty highly probable etymologies seemed to me more cogent than two-hundred unconvincing ones.

For no other proposed Hamito-Semitic African languages can anything be presented remotely approaching the morphological and lexical resemblances adduced here for the Chad languages. We arrive therefore at the definite conclusion that the language family traditionally named Hamito-Semitic has five coördinate branches: (1) Semitic, (2) Berber, (3) Ancient Egyptian, (4) Cushite, (5) Chad. In regard to its membership there remains only to be added the fact that the existence of the Cushite languages Mbugu, Iraku, and Mbulugwe in Tanganyika, considerably south of the main Cushitic group, has generally been overlooked.[10]

If the linguistic analysis presented here is correct, then much of what has hitherto been standard physical anthropology and reconstructed culture history in Africa is in need of reconsideration. The vagueness of the use of the term Hamite as a linguistic term and its extension as a racial term for a type viewed

10 The grouping of the Cushite languages in M. A. Bryan's *The Distribution of the Semitic and Cushitic Languages of Africa* (London, 1947), errs not only in omitting these Southern languages but in other details, most notably that—apparently under the spell of the term Sidamo, the Galla word for heathen—two distinct subfamilies are classified together and the affiliations of eastern Sidamo with the Somali-Galla group is ignored. My conclusions agree with those of M. M. Moreno in his *Manuale di Sidamo* (Rome, 1940). The careful review of the evidence there makes it unnecessary to include formal justification of the classification of Cushite given here in Fig. 3. Such a grouping of the Cushite languages was necessary in order to evaluate the lexical evidence from these languages cited in the word-list at the end of this article. In addition to the languages listed on the map, Doko and Dollo (of uncertain location north of Lake Rudolf) belong to the Western subgroup. The evidence is insufficient in the case of Bako, Kokke Amarr, and Kerre to decide whether the languages are Cushite (see Conti Rossini, *Sui linguaggi parlati a nord dei laghi Rodolfo e Stefania*, in *Festschrift Meinhof*, pp. 247-255). I have been unable to locate E. Cerulli's presumably published material intended to show that the Bako group is non-Cushite. On the basis of the fragmentary evidence available I should be inclined to believe that these languages belong to the Western subfamily of Cushite. M. A. Bryan's abovementioned treatment remains valuable in many respects and the map of the Cushite languages presented here is indebted to hers for many details.

primarily as Caucasoid, has led to a racial theory in which the majority of the native population of Negro Africa is considered to be the result of mixture between Hamites and Negroes. A prominent instance is the standard work of C. G. Seligman, *Races of Africa,* in which the Negroes of the West African forest belt become the only true Negro while all the rest are Hamiticized to a greater or less extent.[11] The speakers of "Nilo-Hamitic" languages are called racially half-Hamites. The Bantu are considered to be another type of Hamiticized Negro on the basis of the speculations of Meinhof (for which he never produced any proof, nor is any proof possible) that "Bantu is a mixed language, so to speak, descended of a Hamitic father and a Negro mother."[12]

With this is often combined a belief either in the inherent superiority of the Hamite element or in a factual estimate that it has shown itself everywhere as a conquering, predominantly pastoral element among Negroid agricultural peoples. Numerous citations from the ethnological literature on Africa could be made to indicate that this is the dominant view. I shall simply quote a few instances as representative of the general trend.

In W. Fitzgerald's *Africa,* we read:

> From a distant period there has been a southward penetration of Hamites into East Africa and through their tendency to intermarry with the sedentary agricultural population has evolved the virile type to which we now refer.[13]

Meinhof says:

> Apparently in the course of history it has repeatedly happened that the Hamitic peoples have subjugated and governed as a ruling people [German original: *Herrenvolk*] dark pigmented Negroes who spoke languages different from that of the Hamites.[14]

Haddon in speaking of the Bantu, says:

> The widely spread keeping of cattle and refinement of facial characteristics betray Hamitic infusion.[15]

Seligman's statement is deeply tinged with the assumption of Hamite superiority:

---

11 London, 1930.
12 Zeitschrift für Kolonialsprachen, vol. 5, p. 164.
13 Page 127.
14 *Die Sprachen der Hamiten,* p. 2.
15 *The Races of Man* (Cambridge, 1929), p. 42.

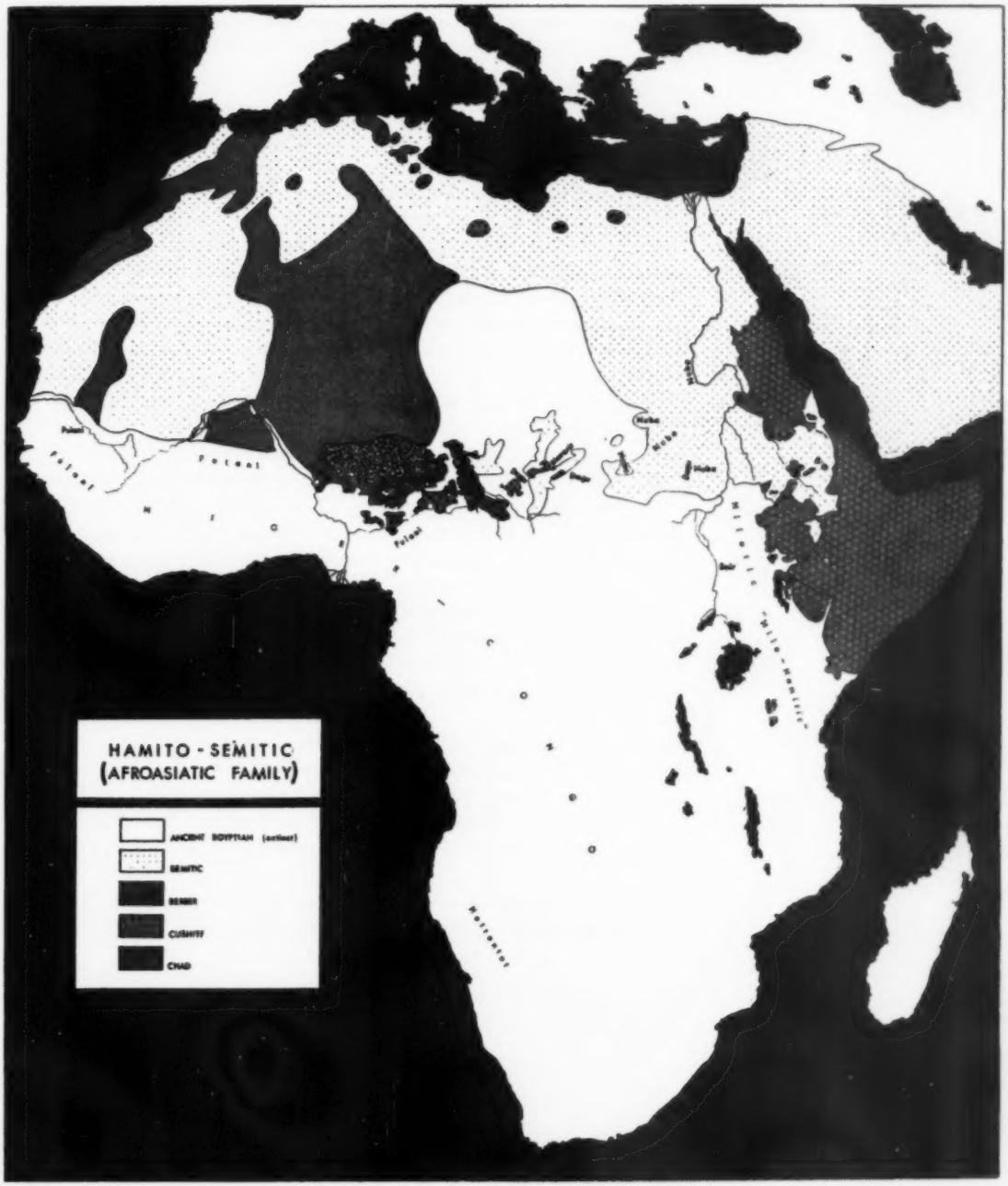


FIG. 2. Continental distribution of Hamito-Semitic (Afroasiatic family).

. . . the incoming Hamites were pastoral Caucasoids—arriving wave after wave—better armed as well as quicker-witted than the dark agricultural Negroes.[16]

The borrowing of a term for a linguistic stock for racial application is always a delicate matter, though if the correspondence is fairly close, as is the case with the term Dravidian in India, there is some justification for the procedure. In the instance of the use of Hamite in Africa, we have the extension of a term, whose original application in a linguistic sense was never made precise, to a great physical variety of populations. If the linguistic analysis presented here is correct, the term Hamite as a linguistic designation can only be applied correctly in Negro Africa to the Cushite populations of East Africa and the peoples enumerated above as speaking the Chad languages. As a matter of fact, even the linguistic use of the term Hamite should be abandoned. The Semitic languages do not occupy any special place in the total Hamito-Semitic complex. Their cultural importance and connection with our own historic past has led to a separate treatment which is not justifiable linguistically. In other words, the non-Semitic languages of the Hamito-Semitic family do not form a linguistic unity as against Semitic. Therefore, the term Hamitic, which has been reserved for this use, does not refer to any valid linguistic entity. Hence I have avoided the term Chad-Hamitic and preferred to designate this group simply as the Chad family. The only remaining use of the term Hamitic is in the complex term Hamito-Semitic and even here it can only lead to misconceptions regarding a special place for Semitic within the entire family. It therefore requires special explanation every time it is introduced in order to avoid such a misapprehension. The term Hamito-Semitic is so well-entrenched that it will no doubt continue to be used. I rather hesitantly suggest the name Afroasiatic for this family as the only one found both in Africa and in Asia. In this way Hamitic could be entirely eliminated from use even as a linguistic term.

So all-pervading has been the loose application of the term Hamite in African racial classification that if the present linguistic analysis is accepted the whole problem of physical variation in Africa should be approached once again independent of preconceptions based on language. It would be a rather remarkable accident if a racial classification based on incorrect linguistics turned out to be valid.

In regard to the correlation between pastoral life and the speaking of Hamitic languages, the present results show that the stereotype of the pastoral con-

16 *Races of Africa*, p. 158

quering Hamite must be abandoned. In West Africa we have a one-hundred percent negative correlation. The only predominantly pastoral people, the Fulani, have been shown to be non-Hamitic-speaking, while none of the Hamitic-speaking peoples of the Chad area are cattle folk.

In East Africa, it now appears that those people with the greatest cultural emphasis on cattle are either East Sudanic (Nilotes and "Nilo-Hamitics") or Niger-Congo in speech (the Bantu). The Cushites, who are Hamito-Semitic speakers, are generally pastoral but in less intensive fashion than these other people.

Previous writers have either considered all these languages Hamitic (Meinhof) or none (Homburger). I have simply tried to classify languages on the basis of the evidence as it has appeared to me. However, any theory which at once harmonizes with the flattering view of the general predominance of the Caucasoid over the Negroid types under all cultural circumstances in Africa and which involves a fairly constant correlation of linguistic, cultural, and physical traits over a long period of time, must almost inevitably turn out to be false.

Comparative Word List[17]

ass: Chad-Bolewa (1) *koro;* Buduma (2) *koro;* Bana (8) *kurota;* Sokoro (9) *koro·*

Cushite—Chara (W) *kura;* Kaffa (W) *kuro·;* Saho (E) *okalo* [62]

back: Chad—Muturuwa (4) *duba;* Matakam (4) *deba;* Gidder (5) *debo-ko;* Musgu (7) *deba*

Cushite—Chamir (C) *dirba;* Bilin (C) *danbi;* Somali (E) *dambo;* Saho (E) *daban.* Semitic—Arabic *dabara* 'to be behind', *dubur* 'back' [332]

to beat: Chad—Hausa (1) *do·ka;* Karekare (1) *duku;* Kilba (3) *digga.*

Cushite—Saho, Afar (E) *tak;* Bilin (C) *dadaku* [340]

black: Chad—Buduma (2) *tsillim;* Kuri (2) *čilim;* Sokoro (7) *silim.*

Cushite—Agau, Bilin (C) *č'alam* 'to be dark'; Bedauye (N) *duluma* 'darkness'. Semitic—Arabic *ẓ.lm* 'darkness'; Akkadian, *ṣlm* 'darkness' [353]

blood: Chad—Hinna (3) *var;* Gidder (5) *beli;* Musgu (7) *fel;* Karbo (9) *ba·ri;* Somrai (9) *bari*

Cushite—Bedauye (N) *boi;* Chamir (C) *bir;* Saho (E) *bilo·*

17 Numbers after Chad languages refer to subgroupings as listed above. Letters after Cushite languages refer to subgroupings as found in Fig. 3. Egyptian forms are ancient Egyptian unless otherwise stated. In these forms consonants only are known. Semitic verbs are quoted in the third person masculine perfective, the standard form. The number found at the end of some citations refers to the numerical listing in M. Cohen's *Essai Comparatif sur le Vocabulaire et la Phonétique du Chamito-Semitique.*

to be: Chad—Hausa (1[18]) *na·;* Karekare (1) *na;* Zumu (3) *na;* Musgu (7) *na;* Somrai (9) *na* (verbal auxiliary)

Cushite—Saho, Afar (E) *na;* Sidamo (E) *no;* Bilin (C) *en.* Egyptian —* Ancient Egyptian *wnn;* Coptic *ne* (verbal auxiliary). Semitic—Gurage *n, na* [445]

bone: Chad—Hausa (I) *ƙaši·* (<*ƙasi·*); Karbo (9) *ka·so,* pl. *ka·si.*

Egyptian—*ḳs.* Berber *i-xs* (<*i-ḳs*) [225]

brother: Chad—Bachama (3) *zino-gi* 'my brothers'; Modgel (9) *sen;* Somrai (9) *sen*

Cushite—Bedauye (N) *san;* Demba (C) *žan, zin.* Egyptian—*sn.*

by, near: Chad—Hausa (I) *gaba·* 'in the presence of'; Musgu (7) *gob;* Bana (8) *gobio*

Cushite—Bedauye (N) *gɛb;* Bilin (C) *gaba·.* Semitic-Ethiopic *gäbo* (borrowed from Cushite?)

cattle: Chad—Karekare (I) *lo* 'meat, animal'; Zumu (3) *lio* 'meat, animal'; Mubi (9) *la* 'cattle'

Cushite—Bilin (C) *lau* 'cattle', *luw-i* 'cow'; Saho, Afar (E) *la·* 'cattle'; Kule (E) *lo* 'cow'

child: Chad—Affade (2) *ul;* Kuri (2) *wu·li;* Somrai (9) *wi·l*

Berber—*u* 'son', *ul-t* 'daughter'. Semitic—Arabic *walad* 'child'

to come: Chad—Yergum (I) *ba*; Kanakuru (I) *bə* 'go away'; Hona (3) *bai;* Gabin (3) *bei;* Tera (3) *ba;* Kulung (8) *ba;* Sokoro (9) *ba* 'go'

Cushite—Bedauye (N) *ba·y* 'go'; Afar, Galla (E) *ba·* 'go'; Sidamo (E) *ba* 'go'. Semitic—Hebrew *bɔ;* Arabic *ba·'* 'return'; Ethiopic *bo'*

cold: Chad—Affade (2) *simmade;* Mackeri (2) *simmade* 'wind'; Gidder (5) *semmia* 'wind'; Musgu (7) *simer* 'wind, cold'; Kulung (2) *simeda* 'wind'

Berber—*semmiD* 'to be cold'

cow: Chad—Hausa (I) *sa·* 'bull'; Kuri (2) *sa;* Margi (3) *hsa* 'bull'; Musgu (7) *saye;* Dam (9) *suwi*

Cushite—Bedauye (N) *ša'* 'ox, cow'; Somali (E) *sa·'* 'ox, cow'; Mbulunge (5) *se* 'ox'. Berber—Tuareg *esu* 'ox, cow' [279]

day: Chad—Mackeri, Ngala (2) *se·;* Margi (3) *ăsi-na* 'today'; *ăsi-duku* 'tomorrow'; Mubi *ha-ssa* 'now=this day'

18 By inadvertence a roman I has been substituted for arabic 1 in a number of instances in this tabulation.—Editor.

Cushite—Mbugu (S) *azi;* Janjero (W) *ăsi* 'now', *ha-šau* 'today'. Berber —*a-ss,* pl. *u-ss-an*

to die: Chad—Hausa (I) *mutu;* Logone (2) *mti;* Hinna (3) *midi;* Musgu (7) *miri;* Mubi (9) *maʿt;* Sokoro (9) *miʿta*

Egyptian—*mwt.* Berber—*emməṭ.* Semitic—Arabic *maʿta;* Ethiopic *motă;* Hebrew *meθ* [488]

dog: Chad—Hausa (I) *kare;* Klesem (2) *kere;* Logone (2) *kəle;* Sukur (3) *kirra;* Muturuwa (4) *kirri;* Gidder (5) *kra;* Mandara (6) *kare*

Cushite—Wollamo (W) *kana;* Kule (E) *karoʿ;* Saho (E) *kare* [189]

to drink: Chad—Hausa (1) *šaʿ;* Angas (1) *šweʿ;* Ngala (2) *šeʿ;* Logone (2) *se;* Bata (3) *sua;* Mandara (6) *šaʿ;* Musgu (7) *sa;* Mubi *suwa*

Berber—*su.* Egyptian—Ancient Egyptian *swr;* Sahidic Coptic *so* [296]

ear: Chad—Affade (2) *sim;* Kuri (2) *summu;* Buduma (2) *hamai* (<*samai*) 'to hear'; Jera (3) *ʟimo;* Matakam (4) *sam;* Gidder (5) *smo-ko;* Mandara (6) *šimma;* Musgu (7) *θem;* Bana (8) *huma-ngu* 'my ear'

Semitic—Arabic *samiʕa* 'to hear'; Hebrew *šɔmaʕ* 'to hear' [82]

to eat: Chad—Hausa (I) *či* (<*ti*); Bolewa (I) *ti;* Kulung (8) *te* 'food'; Bana (8) *ti-na* 'food'; Mubi (9) *tiya* 'food'; *tuwa* 'eat'

Berber—*ča* 'eat'; *tett* habitual form of same verb. Cushite—Bedauye (N) *tiyu* 'food'; Sidamo (E) *it;* Janjero (W) *taʾ.*

egg: Chad—Hausa (I) *ḳoy;* Ngizim (I) *agwɔi;* Zumu (3) *kwali;* Nzangi (3) *kurɛi;* Gabin (3) *gɛɛla.*

Berber—Beraber *ti-glay;* Shilh *ta-glay-t.* Cushite—Bilin (C) *kaʏaluʿnaʿ;* Saho (E) *unḳualale*

eye: Chad—Hausa (I) *ido;* Buduma (2) *yil;* Hinna (3) *idi;* Matakam (4) *ere;* Mandara (6) *ije;* Musgu (7) *aray;* Bana (8) *ir-angu* 'my eye'; Sokoro (9) *yiʿdi.*

Cushite—Bedauye (N) *lili;* Somali (E) *il,* pl. *indo;* Quara (C) *yil, il;* Mbugu (S) *ila;* Galla (E) *ijja.* Egyptian—*yr-t* [62]

fire: Chad—Klesem (2) *ahu;* Affade (2) *hu;* Higi (3) *uhu;* Hina (4) *koho;* Matakam (4) *oko;* Kulung (8) *ako-da;* Sokoro *ako*

Egyptian—*x-t.* Berber—Tuareg *uku* 'be lit'; Shilh *ta-ka-t*

foot: Chad—Bolewa (I) *šeke;* Fali of Kiria (3) *sika;* Cheke (3) *sikə*

Berber—*ta-zux-t* 'leg'. Cushite—Quara (C) *sukanaʿ;* Bedauye (N) *sukena.* Semitic—Arabic *saʿḳ* [265]

FIG. 3: GREENBERG

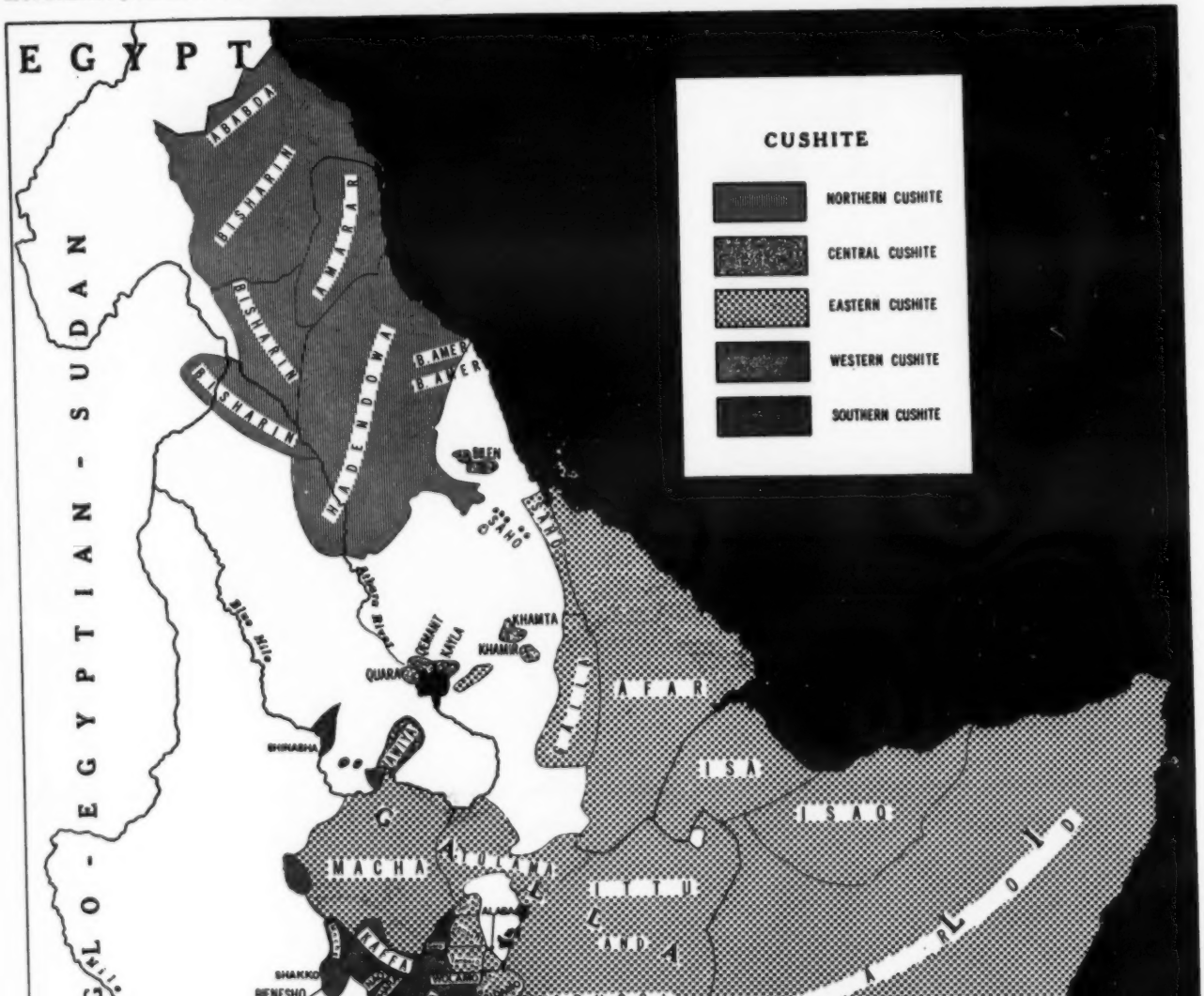


Fig. 3. Cushite subfamily of Hamito-Semitic (Afroasiatic).

four: Chad—Hausa (I) *puɒu;* Bolewa (I) *podo;* Margi (3) *fodu*; Higi (3) *fware;* Muffu (4) *fudo;* Gidder (5) *podo;* Mandara (6) *ufalle;* Musgu (7) *podu;* Bana (8) *fidi;* Mubi (9) *faɒa*

Cushite—Bedauye (N) *faɒig;* Somali (E) *afar;* Galla (E) *afur.* Egyptian—Ancient Egyptian *fdw,* Sahidic Coptic *ftow*

head: Chad—Hausa (1) *kay;* Bolewa (1) *ko;* Affade (2) *ko;* Zany (3) *kirre;* Margi (3) *kir;* Gidder (5) *ki-ko;* Modgel (9) *gol*

Cushite—Bilin (C) *kirkirta;* Saho (E) *kalkale.* Berber—Tuareg *a-kelkel* 'brains'. Semitic—Aramaic *gulgul-ta;* Hebrew *galgol-ɛt* [212]

heart: Chad—Logone (2) *nəfu;* Falli of Kiria (3) *nəffə*

Cushite—Kaffa (W) *nibbo•;* Janjero (W) *niba;* Galla (E) *labbe.* Egyptian—*yb;* Semitic *lbb*

heavens: Chad—Hausa (I) *sama* 'above'; Logone (2) *sama* 'rain'; Gudu (3) *zim;* Mandara (6) *samaya*

Semitic—Arabic *sama•;* Assyrian *šam-e•;* Hebrew *šɔm-aym*

house, to build: Chad—Bolewa (I) *bin* 'house'; Kanakuru (I) *mina* 'house'; Logone (2) *ven* 'house'; Kobochi (3) *vine* 'house'; Gisiga (4) *viŋ;* Sokoro (9) *be•ni* 'build'

Cushite—Sidamo (E) *min* 'build', *mine•* 'house'; Chamir (C) *ŋin* 'house'. Semitic—Arabic *bana•* 'build'; Hebrew *bɔnɔ* 'build'

to know: Chad—Hausa (I) *sani, šina* (<*sina*); Logone (2) *sən;* Buduma (2) *hin* (<*sin*)

Berber—*sin*

like, as: Chad—Hausa (I) *ha-ka* 'thus = this like', *ka-ma•* 'how? = like what'; Ngamo (I) *aka* 'how?'; Buduma (2) *ki-mi* 'how? = like what'

Cushite—Janjero (W) *akka* 'thus, how?'; Galla *aka* 'how'. Semitic —Proto-Semitic **ka* 'like'

meat: Chad—Buduma (2) *su;* Muturuwa (4) *use;* Gidder (5) *soa•;* Mandara (6) *šo•a;* Barein (9) *su•*

Cushite—Bedauye (N) *ša;* Janjero (W) *aša•*

mouth: Chad—Angas (I) *po;* Bolewa (I) *bo;* Margi (3) *fam;* Zany (3) *bua•;* Kulung (8) *vu-na;* Karbo (9) *biy*

Cushite—Bedauye (N) *yaf;* Bilin (C) *af;* Somali (E) *af.* Semitic— Assyrian *p-u•;* Hebrew *pɛ;* Arabic *fam;* Ethiopic *'af*

name: Chad—Hausa (I) *su'na'*; Angas (I) *sum;* Buduma (2) *summo;* Gabin (3) *ʟim;* Somrai (9) *sumo*

Cushite—Bedauye (N) *sim;* Janjero (W) *sun;* Hadiya (E) *sum.* Berber—*i-sem* (borrowed from Arabic?); Semitic—Arabic *ism;* Hebrew *šem;* Assyrian *šum.*

nose: Chad—Klesem (2) *siŋ;* Sukur (3) *šin;* Kulung (8) *asinan*

Cushite—Somali (E) *san;* Chamir (C) *esiŋ;* Chara (W) *sinan*

one: Chad—Buduma (2) *kitta'*; Bata (3) *hido'*; Higi (3) *kute;* Musgu (7) *kate;* Sokoro (9) *ke'ti*

Semitic—Hebrew *'ɛḥɔd;* Arabic *'aḥad;* Aramaic *ḥad*

six: Chad—Hausa (I) *šidda* (<*sidda*); Gidder (5) *serre;* Musgu (9) *sa'ra;* Modgel (9) *side'*

Egyptian—*sys, srs.* Semitic—Proto-Semitic **šidθ;* Arabic *sitt;* Hebrew *šeš*

to sleep: Chad—Bolewa (I) *suna* 'dream'; Logone (2) *san* 'sleep', *wisan* 'to sleep'; Bana (8) *sene;* Mubi (9) *sunɔ;* Sokoro (9) *sonisoni* 'a dream'

Semitic—Arabic *wasina* 'to sleep', *sina* 'act of sleeping'; Hebrew *šenɔ* 'act of sleeping'

to spit: Chad—Hausa (I) *to'fa;* Logone (2) *tufa;* Kobochi (3) *tife* 'saliva'; Mubi (9) *tuffa*

Cushite—Bedauye (N) *tu'f;* Somali (E) *tuf;* Galla (E) *tufa;* Agau (C) *tif.* Egyptian—*tf.* Semitic—Arabic *taffa*

tongue: Chad—Hausa (I) *ha-rše, ha-lše;* Angas (I) *lis;* Klesem (2) *li'za;* Musgu (7) *alesi;* Mubi (9) *lisi*

Berber—*i-ls, i-lis.* Egyptian—Ancient Egyptian *ns;* Sahidic Coptic *las.* Semitic—Arabic *lisa'n;* Hebrew *lɔšon* [436]

tooth: Chad—Klese (2) *sa'ni;* Buduma (2) *sannay;* Gabin (3) *ʟena'*; Margi (3) *šir* (<*sin*); Mandala (6) *tsare'*; Musgu (7) *susi*; Banana (8) *sianu*; Mubi (9) *siŋaŋu;* Karbo (9) *seŋ-*

Berber—Siwa *a-sen;* Shilh *a-sennan* 'thorn'; Tuareg *e-sin* 'incisor tooth'. Semitic—Arabic *sinn;* Hebrew *šen(n)* [262]

tree: Chad—Bata (3) *kade';* Njei (3) *kadi;* Chire (8) *gotto;* Gamergu (5) *xatta*

Egyptian—*xt.* Cushite—Somali (E) *ged;* Mbugu (S) *m-xatu.* Semitic—Assyrian *xaṭṭu* 'stick, branch' [146]

water: Chad—Angas (I) *am;* Ngala (2) *am;* Sukur (3) *yiam;* Matakam (4) *iam;* Musgu (7) *yem;* Mubi (9) *ame*

Egyptian—*ym* (Semitic borrowing?) *'sea'*. Cushite—Bedauye (N) *yam*. Semitic—Hebrew *yam(m)* 'sea'; Arabic *yamm* 'sea'

what?: Chad—Hausa (1) *me', mi', me'ne'ne';* Angas (1) *me;* Buduma (2) *mini;* Margi (3) *mi;* Mubi (9) *mi'*. Sokoro (9) *ma* 'question word'

Cushite—Saho (E) *ma', mi'* 'who?'; Sidamo (E) *ma*. Egyptian—*m* 'who?, what?'. Berber Shilh *ma* 'who?, what?'. Semitic—Arabic *ma';* Hebrew *mɛ, ma;* Assyrian *mi'n-;* Ethiopic *mi* 'how much?'

woman: Chad—Karekare (I) *men* 'wife'; Cheka (3) *min;* Musgu (7) *muni*

Cushite—Geleba (E) *minne;* Sidamo (E) *men-ti;* Iraku (S) *ameni;* Gimirra (W) *main.*[19]

COLUMBIA UNIVERSITY
NEW YORK, NEW YORK

---

19 Professor Robert Lowie has kindly called my attention to a review by Edward Sapir of Meinhof's *Die Sprachen der Hamiten* in Current Anthropological Literature, vol. 2, pp. 21-27, 1913. The following quotations are of interest in reference to the subject matter of the present article.

"I should be inclined to say that Hausa is very probably Hamitic. . . . Hottentot is not Hamitic. . . . Ful [i.e. Fulani] is certainly not Hamitic. . . . I should not be surprised if further research demonstrated beyond cavil that Bantu and Fulani are genetically related. [In the first three articles of this series, I tried to show that they are both part of the Niger-Congo family.]

Sapir is inclined to believe that there may be some relation between Masai and Hamitic. The resemblances noted by Sapir will be accounted for in a later article in this series where I will endeavor to prove that there is a possibility of a remote relationship between Hamito-Semitic, as a whole, and East Sudanic, of which Masai is a member.

I am naturally gratified to find myself in such complete agreement with one whose remarkable perceptiveness in matters of linguistic relationships has assumed almost legendary status.

THE FOCUS OF CUBAN SANTERIA[1]

WILLIAM R. BASCOM

THE WORSHIP of African deities, as it is practised in Cuba today, is known as *santeria.* The deities and the men and women who work with them are known by the Spanish words *santos, santeros,* and *santeras,* or by the Yoruba words *orisha, babalorisha,* and *iyalorisha.* Santeria is a vital, growing institution, practised throughout the entire length of the island, in both rural and urban areas; in the latter, in fact, it is probably the strongest. In recent years it seems to have been expanding, recruiting additional members from the Negro, the mixed, and even the white population.

The African elements of santeria are predominantly Yoruba, or Lucumi, as the Yoruba of Nigeria are called in Cuba. In the town of Jovellanos, Matanzas province, where most of the material on which this paper is based was gathered,[2] the importance of Yoruba religion in santeria is clearly apparent. The Yoruba influence is also recognizable throughout Cuba, despite regional variations, in the names of the Yoruba deities, in similarities to Yoruba ritual, in the Yoruba cities named by Cuban Negroes as homes of their ancestors, and in individuals who can still speak the Yoruba language. On a quick trip in the summer of 1948, more than eighty years after slavery, it was possible to find Cuban Negroes in towns from one end of the island to the other, and in Havana itself, with whom I could talk in Yoruba.

Certain features of santeria have become well known through the work of Herskovits and other scholars in the field of New World Negro studies. In Cuba they have been discussed in the valuable contributions of Ortiz and of Lachatanere, Castellanos, and Martin. These features include the syncretism of African deities with Catholic saints, commonly represented by chromolithographs; the African pattern of possession which has attracted interest as a psychological phenomenon; and the retention of animal sacrifices and African drumming, singing, and dancing in the New World Negro rituals. All of these are important elements in Cuban santeria, but in the mind of the cult members in Jovellanos,

1 Read before the meeting of the American Anthropological Association in Toronto, Canada, December 30, 1948.

2 Field work in Cuba for three months during the summer of 1948 was made possible by a grant from the Viking Fund, which also assisted in the preparation of this manuscript. Field work among the Yoruba in 1937-38 was made possible by the Social Science Research Council of New York City. The sponsorship of both of these field trips by Northwestern University is also acknowledged.

those which are the foundations of their form of worship are the stones, the blood, and the herbs.

In discussing these basic elements of santeria, there are two problems in the field of acculturation to be considered. First, are they derived from Africa or from Catholicism? And secondly, if the traits themselves are African in origin, is their position as the essential elements of the Afro-Cuban cults also African, or has it developed in Cuba under a situation of culture contact? A final answer to the second question may have to wait on a fuller knowledge of West African cultures, but it is of far greater theoretical importance. It will show whether or not the "focus" of an institution or culture pattern—to transfer a term from culture as a whole to a part of culture—has been retained, in addition to the retention of individual cultural traits or items. This point is of more than academic interest, since the preponderance of African retentions in the field of religion among the New World Negroes, over all other aspects of culture, has been interpreted as evidence that religion is the focus of African culture.

The fundamental importance of the stones in Cuban santeria was stressed consistently by informants. While chromolithographs and plaster images of the Catholic saints are prominently displayed in the shrines and houses of the santeros, they are regarded only as empty ornaments or decorations, which may be dispensed with. The real power of the santos resides in the stones, hidden behind a curtain in the lower part of the altar, without which no santeria shrine could exist. The stones of the saints are believed to have life. Some stones can walk and grow, and some can even have children. Informants told of their own experiences with stones which they had thrown into the streets or otherwise disposed of, only to have them reappear in the house. The most powerful stones are said to have been brought from Africa by the slaves, who concealed them in their stomachs by swallowing them.

The power of the stones is conceived as an invisible fluid, whose force at times can be felt. This is the power which protects the santero and the members of his cult house, and through which the "guardian angel" or saint manifests its blessings. This miraculous power is given to the stones by treating them with the two other essentials of santeria, herbs and blood. This treatment is known as "baptism" *(bautismo)*. Stones which have not been prepared in this way, as well as any item of cult paraphernalia which has not been "baptized," are called "Jewish" *(judia)*; they are said to be distasteful to the saints, as well as completely powerless.

When he acquires his stones, each santero takes an oath to protect them constantly and to feed them at least annually. When the saints are fed, the warm

blood of the sacrificial animals is allowed to flow onto the stones. The blood must be *caliente* or warm, so that the invisible fluid of the stones may be increased. Following the blood sacrifices there is drumming, singing, and dancing, usually for three successive nights, during which the possessions take place. A large number of possessions is desirable because it is a sign that the saints are well fed and satisfied, and also because the fluid and power of the stones are increased by the presence of saints in possession. The major cult rituals of santeria center about the annual feeding of the saints through the stones.

Resguardo or protective charms are also prepared with herbs and blood in direct contact with the stones from which they acquire some of the invisible fluid. By wearing prepared strings of beads or other objects on the body, the protective power of the saints can be kept nearby at all times. Before and after the annual feeding of the saints, the stones are washed in herbs and the *resguardo* of the cult members may be washed at the same time. The cult members themselves are prepared for possession by washing their heads with herbs and "feeding" their heads with blood. The head may be washed at other times without herbs, but before it can be "fed" it must be treated with herbs. Herbs are also used for brews and baths, and for the cleansing of the house that follows the annual feeding of the saints. A knowledge of the properties and uses of the herbs is as important to a santero as a knowledge of the rituals, the songs, or the language.

To strengthen the fresh mixture of herbs and water used in washing or baptizing the stones and the *resguardo,* a little of the infusion containing the herbs and blood from the sacrifices made in previous years may be added. This infusion, known by the Yoruba name *omi ero,* is the most powerful liquid in santeria, and is said to contain all seven "*potencias.*" It is added to after each annual feeding and preserved for future washings and baptisms, for removing evil influences, and for washing the hands of the *matador* and his assistant before they begin the killing of the sacrificial animals. Unless the hands of the *matador* have been washed in *omi ero,* and unless his knife and the stones themselves have been washed in herbs, the gods will not drink the blood through the stones.

Each saint has its own particular herbs, its own type of stone, and special animals which are its favorite food. The function of the herbs is to cleanse and refresh and to prepare individuals or objects for contact with the saints. The blood is the food of the saints. The stones are the objects through which the saints are fed, and in which their power resides. One might perhaps find parallels to these three elements in the consecrated stone *(el ara)* in the Catholic altar, in the blood of Christ as symbolized in the Eucharist, and in the burned palm leaves used on Ash Wednesday. The differences, however, are so marked that

one may safely say that the blood, the stones, and the herbs as they are employed in santeria are foreign to Catholicism.

Among both the Lucumi in Cuba and the Yoruba in Africa there are certain saints for whom objects other than stones are actually fed, e.g. Ogun, for whom iron is used. The Cuban concept of the stones *(piedras)* is equivalent not to the Yoruba *okuta* (stone) but to the Yoruba *iponri,* which is the material object which represents the power of a deity and to which its sacrifices are actually presented. The place of blood sacrifices in African religion and of herbs in African magic is widely recognized, although the use of herbs in the worship of the African deities is less well documented. Nevertheless, "the three hundred and seventy-six different kinds of leaves which are used for the making of a *vodu*" are mentioned for Dahomey, with the following footnote

> whatever the exactitude of the figure, that leaves are of great importance in the *vodu* cult has been seen in the description of the making of a *vodu* and in the quoted phrase, "If you knew the story of all the leaves of the forest, you would know all there is to be known about the gods of Dahomey."[3]

Until further work has been done on the religious use of herbs in Africa, it is not possible to show specific similarities between Africa and Cuba in the particular herbs associated with each saint comparable to those found in the types of stones and the animals whose blood is most appropriate for individual saints. Specific correspondences are also to be seen in the types of beads and colors associated with the individual saints; the names, characteristics, and mythological interrelationships of the saints; the techniques of divination; the prayers and songs in the Yoruba language; as well as in the patterns of drumming, dancing, and possession previously mentioned. The details of these and other elements of santeria ritual and belief, however, do not concern us here.

We may then, take the use of stones, blood and herbs in santeria as African in origin and turn to the second and more important problem. Is the emphasis on these three elements as the focus of Cuban santeria also derived from Africa? Here we can speak with less assurance in terms of our present knowledge of West Africa. On the basis of my own field work among the Yoruba, stones (or *iponri*), blood, and herbs do not seem to assume the importance that they hold in the minds of Jovellanos worshippers. The mythology or theology of the gods, the prayers and the verbal formulæ, and the rituals themselves seem of equal, if not greater importance. In the full reports of Herskovits and Rattray on the neighbor-

3 Melville J. Herskovits, *Dahomey* (New York, 1938), p. 195.

ing Dahomeans and Ashanti these three elements are discussed, but again not in such a way as to indicate their importance as the focus of religion.

We may here be confronted by an illustration of a point made by Herskovits,[4] that the study of Negro cultures in the New World not only provides leads for further research in Africa, but also throws into relief the important values of the African cultures from which they are derived in a way that cannot be seen in Africa because of the wealth of institutional and ritual detail. It is possible, but not highly probable, that the real focus of West African ritual has so far escaped the scholars working in Africa, while it stands in clear relief in Cuba. This can be finally settled only by a reëxamination of the importance of stones, blood, and herbs in Africa through further field work.

Another possibility, however, presents itself: that in contact with Catholicism, the distinctive features of African religion, which set santeria apart from the rituals of the Church, have been given additional emphasis and have come to be regarded as the core of the religion. In other words, the focal elements of Cuban santeria may not represent a carry-over of the focus of West African religion, but a shift in emphasis which has occurred as a result of culture contact. In this instance, acculturation would have resulted, not in a coalescence of beliefs, such as is represented by the syncretism of African deities and Catholic saints, the use of plaster images, chromolithographs, candles, and holy water, or the recitation of the Lord's Prayer and Hail Mary in santeria rituals, but a shift in the opposite direction.[5] The present evidence is largely negative, but this interpretation is at least plausible.

If it is correct, an interesting psychological point is raised, since the members of santeria cults regard themselves as Catholics. All informants, without exception, stated unqualifiedly that they were Catholics, yet they stressed the importance of those very elements of their faith and ritual which set it apart from that of the Catholic Church. This would seem to be another illustration of Herskovits' concept of ambivalence in New World Negro cultures. While Catholicism is outwardly embraced, it is inwardly rejected; and the stones, the blood, and the herbs have become, perhaps unconsciously, a rallying point for the defense of the African religious tradition.

NORTHWESTERN UNIVERSITY,
EVANSTON, ILLINOIS

4 Melville J. Herskovits, *The Contribution of Afroamerican Studies to Africanist Research* (American Anthropologist, vol. 50, pp. 1-10, 1948).

5 This would be no less significant as far as the dynamics of culture is concerned if further work in Cuba should show that it is not true throughout the island, or even elsewhere in the New World.

TWO JAPANESE RELIGIOUS SECTS

MARVIN K. OPLER

THE DATA for this report concern two minor Japanese religions, the first an offshoot of Buddhism, the second a development out of popular shintoism (not to be confused with the recently organized state Shinto). Both cults were studied at the Tule Lake wartime segregation center (at the California-Oregon boundary), where they revived for a time; but neither, we have since found in Hawaii and on the American mainland, have significance in the United States and its territories, and neither, we presume, are flourishing in Japan today.[1] However, since both Buddhism and State Shinto were, respectively, a foreign import and a State imposition, it is felt that these more peripheral developments may shed light on intrinsic values in the Japanese peasant culture, now undergoing a second period of modification since the Meiji Reform.

THE GEDATSU-KYO-KAI CULT

Gedatsu-kyo-kai is not always known in the urban Japanicized circles though a few rare references are found in Japanese literature.[2] The data were obtained from cult members, the majority of them new converts. The lack of a head, or priest, at Tule Lake complicated discussions of theology, although *gedatsu* was deemed, in the group, to be the highest state of enlightened contemplation in the Buddhist system. Literally, the word means to "untie, loosen, or unfasten." It is, then, a state of emancipation from worldly desires, one of Buddhistic perception. The theological doctrine is not new, but the institutionalized code, said to have stemmed from the Shingon sect in the early twenties, contains innovations.

While the headquarters of the *Gedatsu* church were centered in Tokyo, its spiritual grounds—the place where the spirits were enshrined—were located in Saitama-ken far to the north of the city proper. The head priest, Seiken Okano, known variously in Tokyo as a "psychologist, mind-reader, and expert in predicting events" (according to Tule cultists) was the son of a farmer, and reputed to hold the title of Buddhist priest officially obtained from *Hongwanji*. The Center people referred to him as *sensei* (teacher, or in other connections, doctor) and claimed that he was a pacifist throughout the war and before that time a staunch supporter of the Konoye cabinet. Although *Gedatsu* stems from Buddhism, it is

1 Tule Lake fieldwork, as Community Analyst, took place in 1943-46. In 1946 and 1949, under Social Science Research Council grants, the studies continued.

2 The Tule Lake library of several thousand volumes was used.

not recognized as a Buddhist sect. It has its own doctrine, separate founder, and independent organization. The members read the *norito,* or written prayers used by shintoists, along with the *okyo* or written prayers used by Buddhists. For other evidences of shintoism, one might note the polytheism whereby members worship Buddha, family ancestors, and various shintoistic gods; an associated idea is the animism whereby every natural object is invested with an inherent spiritual being.

The Tule Lake *Gedatsu-kyo-kai,* while called a church (*Kyo-kai*), had no definite place of worship except its *Jinja* (shrine). This was located in an open field between Wards III and VII at one end of the Center area. The persons who officiated were neither trained nor regarded as priests or instructors, but they numbered among them a half dozen rural-born individuals who were said to have had some slight instruction in Tokyo. Membership—again mostly rural—numbered over one hundred converts and appeared to be attracted by the healing powers attributed to both doctrine and ritual.

Each convert underwent a period of meditation, accompanied by a trained cultist, preferably in front of his family altar. The form of this religious meditation was called *Za-zen,* a term used extensively by the Zen-sect of Buddhism, whereby the devotee knelt on the floor in attempts to reach a state of *ku,* or emptiness. The total process of *Za-zen* was called *Shugyo,* or ascetic practice. While no cushions are used in orthodox *Za-zen,* the Tule Lake *Gedatsu* church was wont to use a single layer of blanket, G.I. issue.

Since *Gedatsu* does not prohibit belief in a former faith, the family altar is prescribed for *Shu-gyo,* a ceremony of a half-hour or hour: here the trained cultist reads the mind of the novitiate or communicates with his spirit and with those of his affinities. (An affinity was defined as a connected spirit, within or outside of the subject.) The trainer then remarks on such sins as failure to observe ancestral piety, the guilt incurred in killing an animal, or if a woman is the subject, the sin of artificial inducement of birth or abortion. In these sessions, the trainer is addressed as *sensei* (teacher). Not all of these are assumed to have actually attained the state of *ku.*

In later efforts, as a result of the discovery of one's sins, the trained cultist writes on a sacred board (about six inches by two) with *fude* and *sumi,* ink and brush, the name of the spirit this convert should worship. While most commonly the spirit of an ancestor, it may be the spirit of an animal (which the convert is usually supposed to have killed), of an artificially induced child, or of a relative who died accidentally. This board, inscribed with black Japanese characters, is also covered with mysterious Sanskrit characters in red ink, the latter written by a Buddhist priest. Thereafter the board is called *Sai-jin* and is regarded as the

sacred abode of the god or whatever spirit it happens to represent. Now the cultist may conduct his *Za-zen* ceremony in front of his own *Sai-jin,* which in turn is placed on the family altar and deferred to constantly for forgiveness of sins previously committed. The functions of guardian spirit, amulet, and confessional are thereby all served.

A second sacred board is prepared, again inscribed with black Japanese and red Sanskrit characters; but this time the names of deceased persons, or any spirit, including animals, figure only if they showed signs of evil tendencies, as revealed to the spiritual guide, during the *Shugyo* period. This second board is likewise given the new cultist, who is then directed to conduct a ceremony for the dead by coating the board with sweet tea. To do this, the board is placed in a shallow bowl of the sweet liquid, a variety of sweet tea grown in Japan being used. This second board is called the *Kuyo-to* and the process of laving the *Kuyo-to* with tea is called *Amacha-kuyo.* Though the rite is to placate the evil spirits, it may be used to console the dead in general. At Tule Lake, a Center for Japanese segregants during World War II, it is interesting to note that each member received an additional *Kuyo-to* on which the spirits of all the dead Japanese *and* American soldiers "were inscribed." Throughout the Center history, all members were instructed to conduct *Amacha-kuyo* in order to console the souls of *all* soldiers as a "moral deed." It will be recalled that an orthodox rite of *Amacha-kuyo* is observed annually by Buddhists on April 8th, Buddha's birthday, when, in place of *Kuyo-to,* an image of Buddha is employed, and the tea drunk for curative purposes.

At Tule Lake, aside from the pacifist motif, the *Shugyo* ritual was used to bolster up several conservative emphases of Japanese culture. One woman inductee into the cult whose case I followed because she was a non-conservative Nisei (American-born Japanese) married to an Issei (Japan-born) much older than herself, reported being warned against "unfaithful thoughts"; whether the thoughts were there or not, she seemed thoroughly frightened away from them by the experience. Children-inductees were warned of their "lack of character," "unfilial behavior," or laziness, selfishness, and the like. Though the *Gedatsu* church had no home, members reported daily worship of their two ritual possessions, the *Sai-jin* and *Kuyo-to,* and many spoke of "simple ascetic practice" as being an extension of Japanese rural frugality. As a leading cultist put it: "These practices are not just a warm-room, easy-going program." And so it was. During the first stage of conversion, that is, during the time devotees were praying to have their sins forgiven, purification included waking in the middle of the night, at 2 AM, 4 AM, or 12 midnight, and repairing to the "spiritual grounds" in the

middle of the vacant lot. There, prayer to have sins forgiven was continued. During the novitiate stage of *Shugyo,* consecutive visits of this type were required for twenty-one days, in some cases for as long as one hundred days. Since northern California desert nights are bitterly cold, I was told this was hardening "like nights in Japan would be." In similar vein, I was told the half-shintoistic, half-Buddhistic emphasis, when I questioned it, "represents the best of Japanese spiritual values."

As the membership at Tule Lake increased and passed the hundred mark in 1945, the group constructed a miniature shrine, a very delicate and interesting bit of architecture in natural wood color, but only play-house size. The whole shrine occupied a space of only five feet by three feet and stood less than four feet in height. Around it was constructed a sacred fence with a gate-like opening in front and here a sign stated (in Japanese): "All are cordially invited to worship." The shrine had curved gable roofing in miniature shingle. Inside it stood the altar with the usual shinto offerings of water, rice, and light. There also were occasional food offerings of fruit, canned goods, candy, *mochi, sushi,* greens, and flowers, real or artificial. Before the altar was a box for coin offerings, the offertory periodically distributed, after division, to Red Cross, the *Byoin-Koen-Kai* (Hospital Aid Association), and the Language Schools. Also before the altar stood a large, water-filled bowl and in it a phallus-shaped *Kuyo-to* together with a large spoon. Reading the inscriptions, the enshrined gods consisted of *Tenchi-Dai-Reikon* ("the great spirit of the universe"), occupying the center of the altar; the popular shintoistic sun god, *Dai-Nichi-Nyorai* (not to be confused with the imperial sun goddess, *Amaterasu*—for *Dai-Nichi-Nyorai* is found as one form of Buddha worshipped in the Shingon-sect of Buddhism and in various forms in popular shinto); and the pantheon was completed with various shinto spirits and Buddhas. Beside the shrine was a flat wooden plaque (four feet high and four inches in width) on which were written the words: "The spirits of all the soldiers—Japanese and American—who have died." Food offerings and prayers were also made to this tiny monument.

As observed, the ritual of worship was invariably to cast a small coin into the box (coin offerings were allowed at family altars only on rare occasions), kneel down and bow to the ground, and clap hands four times. Since the spirits were now greeted and called, the reading or reciting of *norito* or *okyo* followed, many bowing the head to the ground or kneeling stiffly during the recital. The praying over, the devotee again clapped hands four times and made a second low bow. When the prayer—usually well-memorized—was done, the hand clapping and a second low bow introduced the *Amacha-kuyo* rite. A third bow might pre-

cede a visit to the "dead soldiers." On occasions when I attended the shrine at early dawn and found visitants, a fourth rite was noted wherein the devotee turned to the east and made a short prayer to the sun. The final withdrawal to the gate was with face toward the altar and with a final bow.

The desolate field in which the shrine stood had been cleaned up, marked with a gravel pathway, and planted, near the shrine, with a slightly landscaped rock-garden. The shrine food-offerings went to children in the vicinity, and there was no theft, according to a cultist, "because of the dignity of the shrine." A steady stream of worshippers appeared after dark or in early dawn, children of cultists being encouraged to visit the shrine before school examinations in order to receive full benefit throughout the day from helpful spirits. As Center closure approached in 1946, the last cultists burnt the structure to prevent desecration. Army personnel, before withdrawal from the Center peripheral fences and watch-towers, became quite excited about the shrine, assuming it to represent State Shintoism incarnate. In the Center, however, residents breathed a sigh of relief when the shrine disappeared in smoke, though for quite different reasons. The after-dark visits had led to rumors of immorality, and anti-Shintoists had falsely identified the shrine with other little known cults such as that of the Inari-Fox Shrine in Ward III. At times, other rumors circulated in the Center that the cult had to do with Snake and Cat spirits (actually, these were represented in a minor way in the cult's popular shinto animism). But Fox, Snake, and Cat, among good Buddhists, were reputed to be either transformers, as the Shintoists believed, or malevolent beings who "take away the person's mind."

Though *Gedatsu* cult members made no special effort to proselytize and avoided the social occasions common to other church groups at Tule Lake, they loudly proclaimed the healing powers of their belief. For them, the cure of illness was to cast out evil via ritual purification and meditation. Persons mentally disturbed or physically ill were chief among the converts. Within the cult, recovery with the aid of *Shugyo* was frequent. Several cult members retained connections with Christian and Buddhist churches, taking only half-way steps toward attaining *gedatsu*. Pacifists, religious non-conformists, and even a Buddhist priest attended, but because members of other churches were attracted complaints were lodged against the converts. Indeed, one *Kon-kwo-kyo* priest, of the second minor cult discussed below, was much disturbed when parts of his flock were seen visiting the Tule Lake *Jinja,* and he once had a complaint printed in Japanese in the Center newspaper. A similar complaint was printed by a group of *Shingon* priests, and the stray charges of immorality, insanity, etc., were heard in all other religious groupings.

Concerning these charges, it is true that one cultist was sent to a mental institution in Stockton, a second, a woman cultist, attempted suicide, and a third was rumored to have periods when he picked imaginary objects from his clothing and put them in a sack with the stark announcement that he "had devils in his clothing." Beyond this, no very marked aberrancy, moral or mental, might be laid at the cultists' door. That the doctrine preyed on insecurities of one sort or another is true, and it spread, as it is claimed to have spread in Japan, largely among persons of rural provenience, the ill, and the mentally upset.

THE KON-KWO-KYO CULT

The second minor cult among Tule Lake religions was a branch of popular shinto. While *Tenrikyo* was the common shintoist sect stressing ritual purification and faith healing, nationalistic or State Shinto was absent in the Center. Our information on the more minor *Kon-Kwo-Kyo* cult was compiled from discussions with its priest and several cult members as well as from actual attendance at church services—two day services and one at night. Holtom's explanations of Shinto in general proved valuable though they somewhat neglected the common cults in favor of the nationalistic development.[3] Japanese magazines, from the Tule Lake Center Library (a residents' venture), provided some rather sketchy articles.

As Holtom showed, Shinto flows in two great currents: that related to national life and called *kokka-shinto,* and the entirely separate *shuha-shinto* or sectarian, popular form. The former is not a church-organized institution at all, but rather constituted nationalistic worship through various types of shrines classified into twelve grades: those in villages, in towns, in city districts, prefectures, and so on up to the shrine at Ise. These were under supervision of the Department of Home Affairs, Bureau of Shrines, and were supported by village, town, municipal, prefectural, and national governments. Loyalty and unity were fostered, but not elaboration of theology—there being no special founders or popular doctrine. The functions of State Shinto were to perform rituals designed to symbolize, exalt, or dramatize the State: its nationalistic teachings were largely disseminated, however, through schools and local communities since the shrines were, most of them, taken over from popular sects and their personnel pressed into service of the state.

The enshrined deities, following this reorganization, fell into four types: (1) the Ise *Jin-gu* to Amaterasu or the Meiji *Jin-gu,* at Tokyo, to the spirit of

3 D. C. Holtom, *Shinto and Japanese Nationalism* (Chicago, 1943).

Meiji; (2) the Yasukuni *Jin-gu,* again at Tokyo, to enshrined soldiers and national heroes; the Nogi and Togo *Jin-ja,* respectively to General Nogi and Admiral Togo of the Russo-Japanese war, and found in Tokyo, are likewise in this general grouping; (3) the local *Uji-gami,* or protectors of the parishioners, like the Hachiman or Kasuga *Jin-ja,* are closer to popular shintoism; (4) the sectarian gods and goddesses, like *Inari,* god of food and shelter, and the *Tenjin,* sky goddesses, are likewise popular shinto deities. Holtom, in listing 110,239 shrines and 15,800 state priests in his count of 1940, is careful in distinguishing State from sectarian elements.

Sectarian shintoism has specific doctrine, a sect founder, and a separate organization to disseminate his teachings. Such organizations were called *Kyo-kai;* came into existence as formal religions after the Meiji restoration, or after 1868; and were later placed under the Department of Education, Bureau of Religion. Sectarian shinto existed in thirteen sects and numerous sub-sects with 16,238 churches and 124,877 teachers, priests, and officials ministering to the needs of some 17,607,605 adherents by Holtom's most recent count.

Kon-Kwo-Kyo literally means "the bright light doctrine." In expanding on this theme, the priest stated: "Nothing can be seen at dusk: ours is the doctrine of the light which shines in the universe and brightens its truth." The sect founder, we were told, was Bunjiro Katori, born August 11, 1815, in Kon-Kwo-Cho, in the southern Honshu ken of Okayama. The Katoris were poor farmers, Bunjiro a second son, and, at the age of eleven, the boy was adopted into the Kawate family. In his twenties, during a long illness, the youth despaired of cure through medical aid and began his search for "spiritual faith." His doctrines, implying faith healing, were first practised in the family and neighborhood circle, but soon took root firmly in Kon-Kwo Town. From here the ideas spread throughout rural communities in Japan, and in 1901 the *Kon-Kwo-Kyo* church received official recognition as an independent cult of popular shinto. Headquarters remained in Okayama, now called the *Rei-chi* or "spiritual ground."

At Tule Lake, green *tatami* mats were used for ritual kneeling, as in Okayama. The cultists gathered from early morning hours (4 AM) to late afternoon (5 PM)—called daylight services—and occasionally at night. (These "daylight hours" are favored as traditional hours for services by the past three generations of cultists.) The church was located in Block 31 of the Center with Mr Y—— functioning as head priest and his wife acting as assistant. Another priest, a Mr G——, who resided in Ward VIII at the opposite end of the Project, made regular visits to the Block 31 church. Membership was approximately fifty adults.

The actual ritual was reminiscent of that of the *Gedatsu* church. In worship,

one first cast a small coin, as offering, into a bowl before the altar, made a low bow, clapped the hands four times, and then prayed in a low voice. After prayer, the devotee again clapped hands four times, bowed low, and withdrew. On occasion, a person knelt in front of the altar stair to accomplish the above procedure, but only older people approached this closely. After prayer, there were always salutations to the priest and bows to his wife who remained on her knees, while the priest himself, in kimono and wearing a *hakama,* sat to one side in a chair.

The altar was Center-made in natural wood color with elaborate designs. Water, rice, and candles constituted the altar offering, but at times *sake* (rice wine), fruit, and cake were seen. A few feet from the altar was the sacred fence beyond which only the priest himself could enter.

Daylight services usually applied to Sundays when a larger group gathered. A few moments of silent prayer were followed by ceremonial purification, accomplished with the aid of a magical wand-like device[4] waved over the heads of the worshippers by the priest. The latter then directed what he called communion rites between the worshippers and the gods by reading the *norito* or written prayers. The content of the *norito* typically included dogma or interpretation on the period of "the age of the gods," a mythological period posited at the beginning of Japanese history; it might include some words of "thanksgiving," a confession of sins, and mention of the values of spiritual purification. Other *norito,* used more often in connection with individual ceremonies, emphasized the exorcizing of demons and evil spirits, or dwelt on the virtues of faith-healing. Some *norito,* translated for my benefit, obviously asked for good harvests, the promoting of health and prosperity, or—for a marriageable girl—the securing of a happy marriage. What *norito* did not cover, I was told, prayers could request.

In the average Sunday service, as observed, there followed a sermon, as in the Buddhist Youth Services, and a final group prayer. After the service, the offerings made to the *Kon-Kwo* gods were taken from the altar and distributed to the people. Since these included such items of food as fruit, cake, wine, and tea, the Sunday service ordinarily concluded with a kind of informal tea party.

Of the adult members, most were Issei, or first generation. Kibei, or second generation children educated in part in Japan, came only as sightseers, if at all. The only Nisei present seemed to be the very young children of Issei members. This was in marked contrast with the Buddhist and Christian churches which required special services for younger membership.

Possibly because of this fact and because of doctrinal differences, *Kon-Kwo*

4 This corresponds to the *nusa* of Embree: see J. F. Embree, *The Japanese Nation* (New York, 1945), p. 182.

priests and the assistant were unsparing in criticism of Buddhist practices. They particularly scorned the mournful manner of conducting Buddhist funerals, and by contrast conducted happy, smiling funerals based on a concept of death as being the special time the *Kon-Kwo* god called a person to heaven to serve him. Death was phrased also as the time when a mortal had completed his tasks in the nether world.

The *Kon-Kwo* Church, prior to evacuation of Japanese Americans, was present in Tacoma, Portland, Los Angeles, and San Francisco. In Hawaii, it was also present in most major settlements. Probably because of the widespread confusion between State and sectarian shintoism, all or most of the American *Kon-Kwo* priests were interned as war broke out, though only two of several priests came to Tule Lake as a result of segregation. Under complete freedom of religion, in that Center, the cult revived to only a small handful of adherents, and as we have seen above, *Gedatsu* Buddhism had a more spectacular growth. In comparison, *Gedatsu* offered more in faith healing and was even more escapist in its emphases. But like it, the Tule Lake *Kon-Kwo-Kyo-Kai* afforded nothing in the way of good leadership, social activities, intellectual stimulation—only spiritual encouragement. The old Japanese ritualism, noted in both forms of ceremonialism (and without much difference) appealed to ritualistic-minded Issei with an interest in, and psychological need for, whatever solace or security was granted in faith healing. In both churches, the adherents had a strong belief in the magical healing power of each doctrine and in their separate modes of ritual purification.

Perhaps the cults had other purposes. Though not essentially social in function, they provided social contacts and quasi-social interests for lonely Issei adherents. In another connection we have presented some of the popular *Senryu* poetry developed at Tule Lake.[5] Some halting *Senryu* poems composed by members of the *Gedatsu* and *Kon-Kwo* sects are here added to convey a sense of the frustrations, worries, and loneliness of some of these converts:

Mitsuki nochi	For three months
Made matasareru	Have to wait for
Ha No-chiryo.	Dental treatments.
Shyu-yo-sho	In the Center
Fuyu no hiashi mo	The shortness of a winter day
Oshiku nashi.	Is not regretted.

5 Marvin K. Opler and F. Obayashi, *Senryu Poetry as Folk and Community Expression* (Journal of American Folklore, vol. 58, pp. 1-11, 1945).

Kyo mo mata	Today, also,
Munashiku kurasu	Is gone, wasted,
Shyu-yo-sho.	In the Center.
Porchi dake	Only a porch
Oshii fubuki no	Is desired in a snow-storm
Seiri guchi.	At the door.
Canteen no	Through the Canteen store
Benri ga sugite	[Providing] too much convenience
Akaji dashi.	Debts are incurred.
Akai niku	Red meat!
Baniku ga kitato	"Why horse meat's come,"
Dema ga tobi.	So the rumor flies.
Shyu-yo-sho	In the Center
Kane mo-o-ke towa	With money-making
Yen o tachi.	Friendship is forgotten.

STANFORD UNIVERSITY
STANFORD, CALIFORNIA

CALENDRIC TERMS OF THE SOUTHERN PUGET SOUND SALISH

ARTHUR C. BALLARD

THIS PAPER is an attempt to summarize and classify the data on the year and its subdivisions into seasons and months as conceived in former days by the southern Puget Sound Salish. In addition to my own findings in the field, I have included also the data thereon available from other sources. The material available in the field is scanty and sometimes contradictory and confusing. Little has yet been written on this topic, so the publication of this paper may now be worth while and helpful in stimulating further research.

In the lists of terms obtained from informants in the field there is a divergence in the textual representation of identical terms. This is due in part to individual and dialectical differences of enunciation and in part to the difficulty of an amateur in mastering the phonetic nuances encountered, as well as to changing practice in the use of phonetic symbols.[1]

These notes were taken over a stretch of years and were usually incidental to research in other fields. Of the ten informants quoted, only three are now living.

THE YEAR AND ITS SEASONS

Among the people of southern Puget Sound the term dza'ladəb signifies "year" or perhaps simply "long time." In the mythological contest between Ant and Bear to determine the length of day and night, Bear sang,

dza'ladəb bəlα'xi, dza'ladəb beła'xi
"long time day, long time night!"

The division of time in yearly cycles is recognized in the annual recurrence of the season of cold. Thus one may say $x^{w}α'l'$axtcid st'α's, "I am nine winters old." The root syllable t'αs "cold" is found in all the expressions signifying "winter," thus t'αs, padt'αs, t'αsəb, padt'αsəb. In the expressions, shadəb, padha'dəb, signifying "summer time," the root syllable had is a derivative of the term hod "fire" and means "hot." Thus summer is the hot season.

While the terms for winter and summer are stable, there is no uniformity in the expressions used to designate the spring and autumn seasons, as we commonly

1 The phonetic transcription has been revised by Dr Melville Jacobs of the Department of Anthropology, University of Washington. [Because of typographical limitations, alpha and inverted e appear here above the line of text in some native words. This has no phonetic significance—Editor.]

use them. It may fairly be concluded that the people of this region did not conceive of the division of the year into four seasons of equal length, as do those of a more sophisticated culture. No note seems to be taken of the movement of the sun, from north to south and from south to north, as determining the seasons. There is little uniformity in the responses to questions concerning the spring and autumn seasons. For spring, a Puyallup informant used the term padhe″adəb, "time of becoming warm." Similarly, Jack Stillman, a Snoqualmie, gave among others the term sgᵅlka′bats, derived from gʷe′wgᵘlil, "it is warming up." We encounter also, padtco″tcla, "season of leaves," and ci′a′bats, "everything growing." Still other terms for springtime, whose meaning I have not learned, appear in the table of the seasons below.

For autumn Gibbs[2] gives padtolus for the Nisqually. A Snoqualmie informant gives padtulo′s, "fall of the year." Other informants regard this term as equivalent to padha′do', which is the term for the season of the humpback salmon, and still others the time of renewed vegetation after summer's drought. On the other hand, Haeberlin[3] records lati·′t′səb, "it is getting a little cold." A Puyallup informant uses the expression lət′e′t′ᵅsəbaxtciɬ, "we are getting a little winter." I would therefore conjecture for autumn the term padt′e′t′ᵅsəb.

THE MONTHS

While the four-seasonal division of the year in the strict sense is absent, a series of time divisions, or seasons, regarded as "moons," is recognized. These correspond in part to the recurring phases of the moon. The people take note of the moon's phases and their relationship to the varying tides, since these phenomena have a direct bearing on their economic life. By long experience and observation, groups distant from the seashore are able to determine the occurrence of extreme low tide favorable to the gathering of shellfish. They can thus time their migrations to the beach accordingly. There is an extended nomenclature of tides and phases of the moon, which is deserving of study but lies outside the scope of this paper. None of this, however, seems to manifest itself in the calendric terms in general use. The syllable pad-, or pᵅd-, occurring as a prefix in many of the terms employed, means, not "moon," but simply "season" or "duration."

According to one informant, the year has thirteen lunar months; another says twelve, "two of them big moons." Whether the discrepancy between the

2 George Gibbs, *Tribes of Western Washington and Northwestern Oregon* (Contributions to North American Ethnology, vol. 1, part 2, Washington, 1877).

3 Herman Haeberlin, unpublished notes on the Nisqually.

lunations and the solar year was known or suspected is doubtful. There is a vagueness in the responses for a portion of the year, which suggests the possibility that there may have been an intercalary period, albeit unrecognized as such.

THE TERMINOLOGY OF THE MONTHS

In response to query, ten persons of Puyallup, Suquamish, Snoqualmie, and Duwamish antecedents have reported nearly thirty terms in the local dialects as designating the so-called months of the year. From seven persons the number of terms so obtained vary from five to twelve. Some terms evidently refer to seasons longer than lunar months, others are frankly alternative. Some contradictions may be due to local diversity of usage. Following are the names given, with some remarks concerning them:

1. waq'waq'u's "frog's face" or "when frog talks"

This is the time, usually in late February, when the winter is broken and the frogs begin to sing. People now say, "Mink is coming ashore." This is a reference to the myth tale, "Mink Traps a Monster."[4]

2. po'po'i'g^{w}ad, po'pohi'g^{w}ad "blow time" or "everything tips over"

During this month there were repeated storms of wind and rain. "You'll be hungry all the time," they said. By this time the stores of food for winter have been consumed and new supplies cannot yet be gathered in quantity. Five informants give this term.

3. sxdze'dzehi "pregnant" or "plant life in bud and sprout"

Spring is now just beginning. This term is given by two informants—one of them Snoqualmie, one Suquamish. This seems to be an alternative for one of the preceding terms.

4. ulɛ'p explained as "moon when branches are ready to bud"

The time indicated seems to be earlier than that of the preceding term. This name, given by a Green River informant, may be a Yakima term.

5. w$^{\alpha}$x^{w}əxe't "plants in flower, leaves budding out"

Two informants, one Suquamish and one Green River, give this term. The actual meaning of the word is not known to me. The time indicated is later than that of sxdze'dzehi.

6. sk'a'g^{w}alab, k'ag^{w}ala'pk "the wind dies down," "quiet now; turning of the month"

"This is the time when the ducks go north. Everything becomes 'good,' peace-

4 Arthur C. Ballard, *Mythology of Southern Puget Sound* (University of Washington Publications in Anthropology, vol. 3, no. 2, 1929), pp. 124-126.

ful. Out in the bay, upon beds of kelp, porpoise gives birth to her young." Six informants give this term.

7. $g^{w}\alpha'$lkbitc "salt water shining"

This term, given by a salt water (coastal) informant, from a Minter Bay group associated with the Puyallup, was said to be the name of a time in late spring or early summer. It also seems to be identical with the Nisqually term recorded by Haeberlin for December, with the notation "end of year, a big month."

8. padta'g^{w}ad and variants[5] "time of yellow salmon berries"
   padtc$\alpha'g^{w}$adetct'c^{u} (Minter Bay dialect) "tide of salmon berry time"
   Six informants give this term.

9. padt'sa'bt and variants "time of red elderberries"
   padt'sa'btade'tct'c^{u} (Minter Bay) "tide of red elderberry time"
   This term is given by five informants.

10. padg$^{w}\alpha'$dbix^{u} and variants "time of creeping blackberries"
    padg$^{w}\alpha'$dbixetct'c^{u} (Minter Bay) "tide of creeping blackberry time"
    This term is given by four informants: it also appears in the Haeberlin notes on the Nisqually.

11. padt' a'qa, padt'a'ẋad[6] "time of sallal berries"
    padt'a'qa'etct'c^{u} (Minter Bay) "tide of sallal berry time"
    This term is given by five informants, usually for August. One informant attributes it to September after noting a change of tides in August. This also appears in the Haeberlin notes and is recorded by Smith.[7]

12. padk^{w}ola'ład "berry time"
    This term is given for August by a Green River informant (see concluding remarks).

13. padtcida'dx^{u} "salmon time," "time to dry salmon"
    The same informant gives this term for late August (see also concluding remarks).

14. padha'do' "time of humpback salmon"

---

5 There are dialectic variations in the term for yellow salmon berry indicated as follows: Snoqualmie dza'tig^{w}ad; Duwamish tca'g^{w}ad; Puyallup ta'g^{w}ad.

6 The employment of terms to designate the season when this fruit ripens is to be found over a wide area to the north of this region (cf. Leona Cope, *Calendars of the Indians North of Mexico*, University of California Publications in American Archaeology and Ethnology, vol. 16, no. 4, 1919).

7 Marian W. Smith, *The Puyallup-Nisqually* (Columbia University Contributions to Anthropology, vol. 32, 1940).

This term is given for September by the same informant and by a Snoqualmie. The humpback runs only in alternate years.

15. padtulo′s "time when the salmon begin to run" "same as ha′do'," "autumn," "September"

This term is given by four of my field informants and is noted by Smith, also by Gibbs. Only one field informant fixes it upon a single month (see concluding remarks).

16. padiyo′q^{u} "moon of the jack salmon"

This term is given for September by one informant, a Snoqualmie. It seems to be an alternative for padha′do'. Perhaps the jack salmon[8] was more important to the economy of the Snoqualmie than to that of other groups in this region.

17. padt'ɬwa′y' "season of dog salmon"

This term is given by three informants, two Snoqualmie and one Green River. The time is late September and early October. It is also recorded in the Haeberlin notes on the Nisqually where it is placed later than the term which follows below.

18. padk^{w}α′x^{w}its "season of silver (or red) salmon"

A similar term, padk'^{w}ets, is found in the Haeberlin notes. The time seems to be late October and early November. One informant says on October 29, "It is padk^{w}αx^{w}its now." While the silver salmon begin to run earlier than the dog salmon, they remain in the rivers later.

19. sxto′tolupt, sxte′lexed "salmon beginning to run"

This is the designation for October by a Duwamish informant, who does not note the succession of runs of the various species.

20. padola′dx^{u} "salmon running thickly"

This is the month of November, according to the same informant. A Puyallup informant calls it "time to dry salmon." This may be an alternative for padticida′dx^{u}, although the informant first quoted places it later in the season. It is said that sola′dx^{u} is the Snohomish name for salmon, while tcida′dx^{u} is the name in use by the more southern groups. Perhaps these words mean, not simply salmon, but salmon-for-drying or salmon-as-food.

21. yɛcu′ɬ "the youngest month"

This is the term for November given me by Snoqualmie Charlie, and the one with which he starts the year. While his series is the most nearly complete of those

8 Probably a sub-variety of the Chinook salmon (*Oncorynchus tshawytscha*), variously known on Puget Sound as king, tyee, and jack. According to Jack Stillman, Snoqualmie informant, iyo′q^{u} is the Snoqualmie equivalent of tuwa′ld, the name used farther south toward the head of the Sound for the king salmon.

given, it is noteworthy that this term has not been recorded by me elsewhere in the area.[9]

22. we'wulwulk "leaves fluttering down"

This is the designation for November by Mary Dominick, Green River-Duwamish. The name is based on a myth episode. Little Silverside was going up the river. Big Silverside said, "What are you coming up for?" "I want to see the leaves fluttering down," Little Silverside answered.

23. padt'e'ẋʷelst'ɬ "time of falling leaves"

This seems to be an alternative for the preceding expression, and the time, November. On November 28 informant remarked, "It is about gone now." For November the Haeberlin notes give sxpe'gpegʷad, "time of singing power songs."

24. sxci''tcɛlwa's (and variants) "put your paddles away"

December. "About Christmas time; you go nowhere. It is a bad month, you starve"—Sam Wilson, Suquamish.

"Put the paddles away. Do not say, 'I am going.' Just get in the canoe; don't make too much noise. People can't walk fast; they get nowhere at this time. Young people have to be careful. That moon will throw them down"—Lucy Williams, Minter Bay.

"This is the Puyallup name for po'po'i'gwad (March). It is too windy for people to travel. All cockles go out and travel then"—George Young, Puyallup.[10]

25. iło't słukʷa'lb "old moon"

December. This term is given by two informants, upper Puyallup and Suquamish.

26. ẋa'ẋa słukʷa'lb, hekᵘ ẋa'ẋa "holy moon," "big tabu"

These terms are used by Suquamish and Minter Bay informants respectively.

27. st'ła'lkab (clairvoyant power) "the oldest month"

December. "This is the oldest month. It is a bad month. It opens into the ground. If a person has been sick a long time, he is likely to die before this month passes. But if he survives this month, he is likely to live another year. The name of this month is that of a supernatural power which enables its possessor to know distant and future events"—Snoqualmie Charlie.

The Haeberlin notes from the Nisqually give the term gulq'be·'tc as the name for this month. Smith, in *The Puyallup-Nisqually*, gives stᵅs sloqʷalm.

28. iłso'qʷa słukʷa'lb, iłsa'q słukʷa'lb "younger brother month"

January. "If December is bad, January will be a good month with fair

9 Vide infra for further comment.

10 Vide infra for further comment.

weather. If December is fair, January will be cold and stormy"—Sam Wilson, Suquamish.

iso'tsqʷa "younger brother"—John Simon, upper Puyallup

ix so'qʷa x̣a'x̣a "younger brother tabu"—Lucy Williams, Minter Bay

The above may be considered variants of a single term.

29. sła'li "the good month"

January. "It is called the good month because its survivor may live another year"—Snoqualmie Charlie.

30. st'leq's, q'eq's słukʷa'lb "stuck fast"

late January and February. "The ducks get stuck in the ice; steelhead can't travel; sapsucker is here"—Sam Wilson, Suquamish.

"The snow gets stuck on your feet"—Lucy Williams.

"The term q'eq' is derived from the expression uq'e'q', "he gets started from nowhere." A person listening to a power song in an assemblage becomes attached to, or ensnared in, the spell of the power. He then has to join in and continue singing with the others"—George Young, Puyallup.

31. The Haeberlin notes on the Nisqually give the name tsa'betceg"ud for January.

The following Yakima terms have been recorded:

32. tsɑqt "December"—Charlie Ashue

33. tcitciła' "January"—Charlie Ashue

tcetcet.ła' "December"—Mary Dominick

34. łempɑ'p February, "little moon"—Charlie Ashue

35. łempɑ'p łempɑ'p March, "a moon not so little as February"—Charlie Ashue

The following is a modern adaptation of the Salish nomenclature:

36. padha'ps "hop-picking time," September—George Young, Puyallup

Here we have a hybrid expression consisting of an English word (ha'ps is the English "hops") with a Salish prefix, to designate the season of the hop harvest, which formerly ran from late August through September, and on into October, but now runs about three weeks in September.

ADDENDUM

(a) Since the preparation of this paper I have before me a copy of a list of Twana terms for five of the months, kindly supplied me by Mr Alfred J. Smith, a volunteer student of Indian life and lore. These terms were obtained by Mr Smith from Robert Lewis, a long-time resident of the Skokomish Indian

reservation, who had attained his majority at the time of the treaties of 1854-55, and they may be taken as representative of Twana nomenclature.

Especially worth noting is yacu'ɬ "long nights" given as the name for December. This is the identical term given by Snoqualmie Charlie for November. It is described by the Twana informant as the time when you "put paddles, spears, and canoes away." Apparently, then, this is an alternative of the term sxci't'cɛlwa's given by my informants, and probably both indicate a time previous to the height of the solstitial season.

The Twana informant follows this with χa'χa "look out good" for January—December in my lists.

The remaining terms do not coincide with any that I have met and are not quoted here.

(b) Another list of calendric terms supplied me was obtained by Mr Smith from Mr Jerry Meeker, a Puyallup of the salt water region, who is well informed on the lore of his people. In this list we find the term pada'qoqʷ, "month when they dry butter clams—not horse clams, that is in May." Here, for once, we meet a term based on the economic activities of a salt water group and not employed by the river dwellers. Whereas, in the calendric schemes of the latter, po·po'i'gʷad, the "windy month," is directly followed by k'a'gʷalab, the month of calm, this is not the case among the salt water groups among whom pada'qoqʷ, the month of drying butter clams, intervenes and pushes the month of calm forward into May.

This informant starts the year with December, which he calls simply "the big cold," followed by February, "younger brother cold." The expression hekʷ χa'χa "big tabu," used by other informants for December, is reserved by him for June and July combined, which he calls, "wonderful—God months." Thus we seem to find a feeling for the supernatural associated not only with the solstitial season of winter but also with that of summer. This may explain in part the vagueness in the responses of some informants to inquiries concerning that season.

In March, called po'pohɛ'gʷad by this informant, "one must put the paddles away, for it will be too windy to fish; the south wind will melt the snow and ice away." This comment supports the terminology and remarks employed by George Young, another Puyallup informant, concerning this month.

The data thus coming to my notice (through the kindness of Mr Smith) since the preparation of this paper was well along have clarified some obscurities and altered some impressions, thus forcing a revision of the conclusions drawn from the material theretofore at hand.

THE WEEK

Since the coming of the white people, a series of names has come into use to indicate the days of the week. The terms, supplied by a Snoqualmie informant, follow:

1. pᵅɬkʷa′bats "Monday"
2. stsᵅbda′ʔti "Tuesday"
3. sli′xʷiɬ "Wednesday" or "third day"
4. sbo′sil "Thursday" or "fourth day"
5. stsla′t'sil "Friday" or "fifth day"
6. tcta′bats "Saturday"
7. padχa′χa "Sunday" or "day of tabu"

SOURCES OF INFORMATION

There is a widespread practice of exogamy in the tribes and villages of this region, with a resultant diversity of background and concepts prevailing within a given group. I am therefore listing, together with other sources, the informants consulted, along with comments upon their several backgrounds and the data supplied by each.

Field Informants

1. John Simon. On May 15, 1918, I consulted him, with James Goudy interpreting. Mr Goudy was a Snohomish-Skagit adopted into the Puyallup tribe. At the time of my visit John Simon was about ninety years of age, one of the few Indians who never married. He was from the upper Puyallup valley, of the group known as tuwa′qʷabc. Through the interpreter he stated that the Indians had thirteen lunar months. Mr Simon was able to recall the names of five, which have been confirmed by other informants. Of the names omitted by him, four have to do with the berry season and others relate to the salmon run.

2. Charles Sotaiakum (sota′yaqəb). With James Goudy as interpreter, I visited him on March 12, 1919. Though living on the Puyallup Reservation, he was a Duwamish from the Cedar River and lower White River area. He was of about the same age as John Simon. With one exception, the months—or seasons—covered by him were other than those noted by John Simon. Like other informants, he notes the four berry seasons, but, unlike them, he notes a change in the tidal phenomena in August before the last berry season. Concerning the salmon run, he does not attempt to date the appearance of one species apart from the others, but contents himself with general terms. It is remarkable that he does not

note the season during which ceremonial practices were followed, inasmuch as he attained manhood while they were in full vogue. He was a grown man at the time of the Medicine Creek treaty in 1854. Indeed, he paddled the canoe which bore Governor Stevens to the treaty grounds.

3. Snoqualmie Charlie (siya'txtəd). He was a man thoroughly conversant with all forms of his people's culture. Notes on calendric terms were obtained from him in 1917, when he was about seventy-five years of age. His nephew, Jack Stillman, acted as interpreter. Snoqualmie Charlie stated that there are twelve moons, two of them big moons. In naming his series, he inadvertently skipped the month of March and used the term po'po'i'g^{w}ad, "the blowy month," for April, calling it "that good month," whereas he must have had in mind the term sk'a'g^{w}alab. If this term had not been omitted, there would have been thirteen in his list. This would tend to confirm the supposition that there were overlaps in the series of time divisions in common use.

Three of the terms named by Snoqualmie Charlie are not noted by any other informant. The expression st'ɬa'lkab for the solstitial season of winter is understandable, since it refers to ceremonial practices of that season, as do other terms employed for the same. The term yɛcu'ɬ for November, with which he begins his series, is rare and its meaning has only recently been clarified to my satisfaction. The term sɬa'li for the month of January, "that good month," is unusual and its use gives rise to speculation. This is the name for deer-tongue (*Erythronium giganteum*), which comes into bloom much later. An informant once called deer tongue "eye of the do'kw^{l}bał (Transformer). The do'kw^{l}bał always sees you." However, I suspect that the name sɬa'li may also designate the twin flower (*Linnaea borealis*). Another informant, to whom a specimen of the latter was recently shown, gave it a similar epithet, "eye of the earth," and also stated that it is the first to bloom, even before the trillium.

4. Jack Stillman (ackanipam). He was a Snoqualmie, well versed in the lore of his people through his association with his uncle. His use of the term sxdze'dzehi for the month of March is worth noting, as it was also supplied by another informant, Sam Wilson. For the spring season Mr Stillman, at various times, gave three alternative terms, which are noted elsewhere. Whether this is to be regarded as one of the "moons" or merely a stage in the advance of spring is open to question.

5. George Young. He is a man in middle life, of Puyallup affiliation. His use of the suffix -uɬ in the names of the berry seasons is not duplicated elsewhere in my findings. A remark of this informant indicates that it may have some reference to the tides. His use of the term ci''ci'tcalwa's as referring to the month of

March differs radically from that of other informants, who refer it to the month of December. As now seems probable, it may apply to both seasons. He makes his contribution to the diversity of terms for the spring season, calling it padtco''tcła, "season of leaves."

6. Nellie Bill Hamilton. She was a Snoqualmie, about sixty years of age when interviewed on August 3, 1935. All the terms given by her were duplicated by other informants. She gave the term padtulo's for September. Others give it as the fall of the year.

7. Sam Wilson. I interviewed him at the home of Mrs Hamilton on August 3 and August 7, 1935. He was a Suquamish, related to members of the Duwamish and other groups, then about seventy years of age. He named six of the so-called moons, in some cases giving alternative terms. He confirms the nomenclature of John Simon for December and January, and is confirmed in the use of certain other terms for January and December by Lucy Williams (Minter Bay). His use of the expressions de'dzehi and waχwaχe't for the early months of spring is different from the usual practice, but the former term is employed by Jack Stillman (Snoqualmie) and the latter by Mary Dominick (Green River Duwamish).

8. Mary Dominick. She is a resident of the Muckleshoot Reservation, and is now past eighty years of age. Her paternal ancestry was from the Suise Creek watershed, tributary to Green River. Her mother was Duwamish and her early life was spent on the Duwamish River and lower White River. Her use of a Yakima term for December is unusual. She omits the berry seasons but contents herself with the expression "berries time" for August. She also identifies "salmon time" as August. Indeed, the salmon run begins before the close of the berry season and it is this overlap that gives rise to a divergence in the terminology employed and makes difficult any attempt to establish a strict sequence of terms. Specifically she names the season, or moon, of the humpback salmon and that of the dog salmon. Her expression "leaves fluttering down" for November finds a synonym in that of one other informant, Mrs Williams. Mrs Dominick said, "Even if there were no white people, the Indians stayed anywhere and had a system of counting for tides, like a calendar."

9. Lucy Williams. Through her father, Mrs Williams is a member of the sxo'tl'babc, or Minter Bay people, a Puyallup-affiliated group. Her mother was Duwamish, from the head of Elliot Bay, and related to the Snoqualmie. Like Sam Wilson, of another salt water group, Mrs Williams omits mention of the salmon run. A unique feature of Mrs Williams' terminology of the berry seasons is the use of a suffix having reference to the tides. It may be correct to attribute this feature to the Minter Bay dialect, which in a number of instances differs

from that of the mainland Puyallup. Instead of using the expression padt'a'qa, "season of sallal berries," she gives padt'a'qa'etct'c^{u}, which might be rendered "tide of sallal berry time," the suffix -etct'c^{u} having reference to tides. "Clams get poisonous that month. There are two tides in that month, one of them a 'no-good tide'." In winter the big tide is known as the "dark tide." Here the tide consciousness shows itself in the calendric terminology.

Mrs Williams' terminology for the winter months agrees with that of Sam Wilson (Suquamish) and John Simon (upper Puyallup). She specifically names January also as a tabu month, while the others do not so express themselves. Mrs Williams' list was obtained on November 28, 1945.

10. Charlie Ashue. He was a Puyallup of Yakima ancestry on the paternal side, born about 1863. His father, a Yakima, remained in the Puyallup country after the war of 1855-56. His mother was of Snohomish ancestry; her death occurred during his childhood. As a boy, Charlie Ashue lived with his father, except for the time spent in boarding school. He was a man of more than average intelligence and affability. It is to the circumstances of his early life that I attribute his failure to recall the complete coast Salish nomenclature for the subdivisions of the year and his resort to Yakima terms. I discussed the calendar with him on November 14, 1929.

Other Sources

11. The unpublished notes of the late Herman Haeberlin. These I have been privileged to examine through the courtesy of Dr Erna Gunther, head of the Department of Anthropology of the University of Washington. More than a quarter century ago Dr Haeberlin made extensive researches in the indigenous culture of this region, a work which was left unfinished by reason of his early death.

The term gulq'be·'tc, recorded by Dr Haeberlin for the month of December is evidently the same as that given by Lucy Williams for a time in early summer. The term sxpe·'gpe·gud, meaning the practice of singing power songs, may signify the month of November, although the month is not named in his notes. It would be late in November, when people began to resume their ceremonial observances. I do not know the meaning of the term tsa·'betceg^{u}ud, recorded by Dr Haeberlin for the month of January. The other terms, except that for springtime, check with my own findings.

12. George Gibbs, *Tribes of Western Washington and Northwestern Oregon,* (Contributions to North American Ethnology, vol. 1, part 2, Washington, 1877). This work contains a Niskwalli-English and an English-Niskwalli vocabulary.

With reference to time divisions, Gibbs makes no mention of the so-called moons, or months, but does record a series of terms for the seasons of the year. The terms are here presented as they appear in his volume, no change being made in the orthography. (As they appear in Table 2, The Seasons, however, the modern orthography is followed.)

spring	pét-lo-ki, o-he´hud-dub, a little warm (diminutive of had-dub)
summer	had-dub, s'had-dub, warm, from hod, fire
autumn	let-us-bukh^{w}, pad-to-lus
winter	a-h^{w}us-tus-sub, tus-sub, from tus, cold

Gibbs comments as follows: "The distinction is not clear except between warm and cold seasons and the periods are not spoken of in any definite sense."

13. Marian W. Smith, *The Puyallup-Nisqually* (Columbia University Contributions to Anthropology, vol. 32, 1940) pp. 135-136. The terms therein noted for the months of March, April, August, and October, as well as those for December and January, approximate those recorded by me. The designation of June as "little brother summer month" is new to me, though suggestive of a similar designation for January. Dr Smith's remark concerning the term padtulo´s, that it may include two months, strengthens my impression that there is no hard and fast line between a lunar month and a season of longer or shorter duration.

14. Leona Cope, *Calendars of the Indians North of Mexico* (University of California Publications in American Archaeology and Ethnology, vol. 16, no. 4, 1919). This paper was the stimulus for the present study. It showed the nature of the problem and indicated the lines of inquiry to be pursued. The systems analyzed in Miss Cope's study have many similarities to practices found in the local field work.

CONCLUDING REMARKS

The annual recurrence of a season of cold and a season of heat was recognized by all the people of this region, and there was no variation in the nomenclature employed to designate those seasons. The people did not conceive the year as being divided into four quarters of equal length. The various terms rendered as spring or autumn may rather be regarded as indicating certain stages in the transition from winter to summer and from summer to winter. The prefix pad- and the suffix -ɔk seem to designate a season or point of time rather than a specific duration such as the 29½ day lunation. Not that the people were ignorant

TABLE 1

Table of the months

	Charles Sotaiakum	Mary Dominick	George Young	Charlie Ashue	John Simon	Lucy Williams	Snoqualmie Charlie	Jack Stillman	Nellie Bill Hamilton	Sam Wilson	total field sources	Haeberlin	Gibbs	Smith	total all sources
waq'ʷaq'u's (and variants)		x			x	x	x		x		5				
wa'wak'o's												x			6
ka'gʷalab														x	1
po'po'i'gʷad					x		x		x						
po'pohi'gʷad		x				x									
popoxe'gʷad											5			x	6
łempᵅ'p				x							1				1
ci''ci'tcalwa's			x								1				1
sxdze'dzehi (dze'dzehi)								x		x	2				2
łempᵅ'p łempᵅ'p				x							1				1
sk'a'gʷalab (and variants)		x	x		x	x				x					
ka'gʷalapg	x										6				7
ka'gwɛlab														1	
ułɛ'p		x									1				1
wᵅ'χwəχe't		x								x	2				2
padsta'gʷad				x											
patcᵅ'gʷatsk	x														
padtcᵅ'gʷatse'tct'cu						x									
padta'gʷaduł			x												
padzᵅ'tigʷad							x		x		6				6
gʷᵅ'lkbitc						x					1				1
exłso'qʷa sᵅ'dəb														x	1
padt'sa'bt				x											
padt'sa'btid							x								
padt'sa'btk	x														
padt'sa'btaduł			x												
padt'sa'btade't'cⁿ						x					5				5
pᵅdxa'dəb sloqʷa'lm														x	1

TABLE 1 (CONTINUED)

Table of the months

	Charles Sotaiakum	Mary Dominick	George Young	Charlie Ashue	John Simon	Lucy Williams	Snoqualmie Charlie	Jack Stillman	Nellie Bill Hamilton	Sam Wilson	total field sources	Haeberlin	Gibbs	Smith	total all sources
spadg^{w}άdbix̣^{u}	x						x								
padg^{w}άdbixé tct'c^{u}						x									
padg^{w}άdbix̣tcuɬ			x												
padgu•́dbix̣^{u}											4	x			5
padt'áqa'			x				x		x						
padt'áx̣ad	x														
padt'áqa'étct'cu						x									
padt'áq'a												x			
p^{α}dt'ák'a sloq^{w}álm											5			x	7
padk^{w}oláɬad		x									1				1
padhádo'		x							x		2				2
padtulós									x		1			x	2
sxtótolupt	x														
sxtélexed	x										2				2
padtcidádx^{u}		x									1				1
padoládx^{u}	x		x								2				2
padiyóq^{u}							x				1				1
padt'ɬwáy'		x					x		x		3	x			4
padk^{w}άx̣^{w}its			x				x				2				
padk'^{w}ets												x			3
wéwulwulk		x									1				1
padt'éx̣^{w}elst'ɬ						x					1				1
yɛcúɬ							x				1				1
sxci''tcɛlwás										x					
tci'tcilwás						x									
ci''ci'tcalwa's			x								3				3
sux^{u}pe•́gpe•gud												x			1
st'ɬáɬkab							x				1				1

TABLE 1 (CONCLUDED)

Table of the months

	Charles Sotaiakum	Mary Dominick	George Young	Charlie Ashue	John Simon	Lucy Williams	Snoqualmie Charlie	Jack Stillman	Nellie Bill Hamilton	Sam Wilson	total field sources	Haeberlin	Gibbs	Smith	total all sources
he·k^{u}x̣a′x̣a						x									
x̣a′x̣a sluk^{w}alb										x	2				2
iło′t sluk^{w}a′lb					x					x	2				2
st$^{\alpha}$s sloq^{w}a′lm											1			x	1
ts$^{\alpha}$qt				x							1				1
tce′tcetła″		x									1				1
gulq'be·′tc (gulq'be′tc)												x			1
iso′tsq^{w}a					x										
ixso′q^{w}a x̣a′x̣a						x									
iłso′q^{w}a sluk^{w}a′lb										x					
iłsa′q sluk^{w}a′lb										x	4				4
exłso′q^{w}a st$^{\alpha}$s														x	
exst$^{\alpha}$′s (abbreviated term)														x	2
tsa·′betceg^{w}ud												x			1
st'łe″qs (stłe'ks)						x				x					
q'e'qs sluk^{w}a′lb										x					
t'łe·″k's (t'łek's)											3	x			4
sła′li							x				1				1
q'eq'			x								1				1
tcetcetła″ (tcitciła″)				x							1				1

TABLE 2

Table of the seasons

		Ashue	Stillman	Young	Williams	Wilson	Gibbs	Haeberlin	Smith
Winter									
	padt'$^{\alpha}$'s	x	x		x	x		x	
	st$^{\alpha}$s								x
	t$^{\alpha}$'səb						x		
	ahw$^{\alpha}$st$^{\alpha}$'səb[1]						x		
Summer									
	padha'dəb	x			x			x	
	p$^{\alpha}$dxa'dəb								x
	sha'dəb, ha'dəb[2]						x		
Spring									
	padhe''adəb[3]	x							
	uhe'hadəb[4]						x		
	sg$^{\alpha}$lka'bats[5]		x						
	st'łalka'bats		x						
	stłakaba'bats		x						
	st'łka'bats[6]		x						
	padtco''tcła[7]			x					
	ci'a'bats[8]					x			
	pe·tloki[9]						x		
	padt'łko'lil[10]							x	
Autumn									
	let'e't'$^{\alpha}$səba'xtcił[11]	x							
	lati·t'səb[12]							x	
	let$^{\alpha}$'səbax[13]						x		
	padtulo's		x		x				
	padtulu's					x			
	padtolus[14]						x		

1 Apparently a verbal form; meaning not determined.
2 The s in sha'dəb is a substantive prefix.
3 "Time of getting warm." Diminutive form of padha'dəb.
4 "It is getting warm."
5 "Warming up." Derived from g^{w}e'wg^{w}lil.

of the lunar phases. Indeed, these were observed closely and a knowledge acquired when to expect the extreme low tides favorable to the gathering of shellfish. The coupling of these phenomena is revealed, however, only in the terminology of the Minter Bay people, a salt water group. Further research may bring to light a wider distribution of such terminology. The extent of the knowledge of the salt water groups with respect to the phases of the moon and its relationship to the tides deserves further study. There does not seem to be an awareness of the discrepancy between the lunations and the solar year. There is a certain vagueness in the responses and there are allusions to a big tide and a lesser tide in midsummer, which may indicate an unconscious attempt at intercalation. Again, the so-called "moons" may have varied in duration. The various constellations were observed, as were their positions at various seasons of the year.

The nomenclaure for the subdivisions of the year fall into three main classes based upon (a) natural phenomena, (b) economic life, and (c) social practices and religious concepts.

We recognize the first of these classes in the terms for the grip of winter, the spring thaw, the growth of leaf and bud, the windy season and the subsequent calm; also in the shedding of leaves in autumn. In the second class there are two groups: one covering the succession of berry harvests and the other that of the salmon runs. The third class of terms has to do with the tabus observed and the consequent mode of life during the dark days before and after the winter solstice.

We have two pictures of the winter season. One is that of a time of gaiety, singing, dancing, feasting, and exchange of visits; the other is that of hunger and apprehension of evil. The road from the underworld is open. Malignant creatures and the shades of the dead are abroad, menacing health and life. Now, if ever, one must participate in ceremonials and call upon his guardian spirit for protection. The usual occupations and travel are tabu. This season terminates with the beginning of spring, signalized by the singing of the frogs.

---

6 These three are apparently variants of one term.

7 "Time of leaves."

8 "Everything growing."

9 Derivation of this term not learned.

10 Apparently a variant of the preceding term; meaning not learned.

11 "We are getting a little winter."

12 "It is getting cool."

13 "It is getting cold."

14 Variously said to mean "time when the salmon begin to run" and "time when grass begins to grow after hot summer months." Exact meaning and derivation not learned.

Specifically, four berry seasons are named, always in the same order. The fruits so named are the yellow salmon berry, the red elderberry, the creeping blackberry, and the sallal berry. One informant contents herself with giving the term padk^{w}ola'ład, "season of berries," which probably covers the duration of the four specifically mentioned. Likewise we learn of the seasons of the jack salmon, humpback salmon, dog salmon, and silver salmon. The duration of the salmon runs may be indicated by the term padtulo's, "fall of the year," "time the salmon begin to run." I do not know the derivation of this term. We have the terms padtcida'dx^{u} and padola'dx^{u}, "time to dry salmon." These are derived from tcida'dx^{u} and sola'dx^{u}, both meaning "salmon," or perhaps more precisely, "salmon for drying." One informant gives sxto'tolupt (alternative sxte'lexed) as "salmon beginning to run," and padola'dx^{u} as "salmon running thickly." The terms rendered "frog's face," "everything growing," "plants in bud and sprout," "plants in full flower," and "time of falling leaves" seem indicative of certain stages in the cycle of the year rather than any specific duration.

The following incident suggests intercalation. In listing the months, one informant skipped the month of August. Upon being queried, his interpreter explained that "the tide changes; there is no tide."

It is strange that no month of the spring season took its name from the practice of digging camas, nor is the season of digging fern roots noted in the calendar. Neither is there recognition of the practice of going to the mountains for huckleberries in the fall. Neither is note made of the season for killing and drying venison. No mention is made of the salmon run by informants living adjacent to the salt water. That is explainable, since the salmon was but one of the food fishes and aquatic animals obtainable in the waters of Puget Sound. In pre-Caucasian times the presence of the porpoise, the sea-otter, and the whale was of great importance in the economy of the salt water people, but not restricted to any given season.

As noted above in the addendum to the body of this paper, one of the spring months, whose name indicates that it is the season for drying butter clams, is so named exclusively by those dwelling along the salt water. This name, based upon a phase of their economic life, is absent from the terminology of the groups living inland. Further inquiry may yet reveal other terms used exclusively by the salt water groups.

The term yɛcu'ɬ, given by Snoqualmie Charlie for November, was that with which he began his series of month terms, calling it the "youngest month." In the data supplied by Mr Alfred J. Smith I find the same term given for the month

of December by an aged Twana informant, Robert Lewis, who stated that the year begins with the new moon in December. The word was said by him to mean, "cold nights." The Puyallup informant quoted by Mr Smith stated the year begins with December, which he called the "big cold month." No other informants report any certain starting point for their yearly cycle. It is remarkable that two informants as far distant from each other as the Snoqualmie and the Twana, speaking different, though related, dialects, should employ the same term and both employ it as the initial term of the series.

Unique features encountered in the calendric schemes recorded are not only the use of alternative terms for a given month-season, but also the use of a given term for two such "months" occurring at totally different stages of the year. For example, the term sxci'tcɛlwa's, represented by the phrase "put your paddles away," is used, not only to denote the advent and prevalence of cold and stormy weather at the beginning of winter, making travel difficult, if not impossible, but also the season of stormy weather in March again bringing about the cessation of travel. In both cases this expression is used as an alternative to another month-term. Another term, g^{w}α'lkbitc, given me by a Minter Bay informant for a time in late spring or early summer has its counterpart in gulq'be·'tc, which term appears for December, in the Haeberlin notes on the Nisqually. The term hek^{u} x̣a'x̣a, given for December by certain of my informants, is reported in the notes of Mr Alfred J. Smith, recorded from Jerry Meeker (Puyallup), as designating a two-month season in early summer. The expression, "younger brother" (moon), recorded by me for January, has its counterpart in the term recorded by Dr Marion Smith for June in her volume, *The Puyallup-Nisqually*. In the notes of Mr Smith we find that Mr Meeker (Puyallup) employs the term padtulu's to represent a three-month extent of time, namely "the time when grass begins to grow after the hot summer months." Certain other terms recorded may represent a duration shorter than that of a lunar month, perhaps simply a point of time. From the knowledge of such practices one is led to the conclusion that the distinction between a lunar month and a stage of longer or shorter duration is indeed but shadowy.

In all my notes the following is the only reference to the recording of time by means of notched sticks: "tca'auxc, ka.'ulac, and tx^{w}α'ptəd of the sahi'wabc. . . . ka.'ulac used to record his age by marks on a stick. He died after the white people came. He was more than a hundred years old—so old, in fact, that the moss was growing upon his knees and elbows!"

In the assembled data presented herein there are contradictions hard to resolve.

That this is so is not surprising, inasmuch as we are dealing with the concepts of a loosely organized society without an organized priesthood or cult to standardize their attainments. All in all, the calendric system, insofar as it was developed by the people of the southern Puget Sound region, was an achievement sufficient for their needs in their pre-Caucasian state of culture.

AUBURN, WASHINGTON